ROYAL OBSERVATORY,

of the

CAPE OF GOOD HOPE

English Feet

APARTMENTS OF THE ASTRONOMER

(On the Second Floor of this room is a Dome 14 feet in diameter)

TRANSIT ROOM

Clock

Transit Piers

ZENITH SECTOR ROOM

Piers for the temporary support of the Zenith Sector

Clock

ASSISTANT'S COMPUTING ROOM

ASTRONOMER'S COMPUTING ROOM

CIRCLE ROOM

Clock

Circle Pier

OBSERVATORY STORE ROOM

(On the Second Floor of this room is a Dome 14 feet in diameter)

APARTMENTS OF THE FIRST & SECOND ASSISTANTS
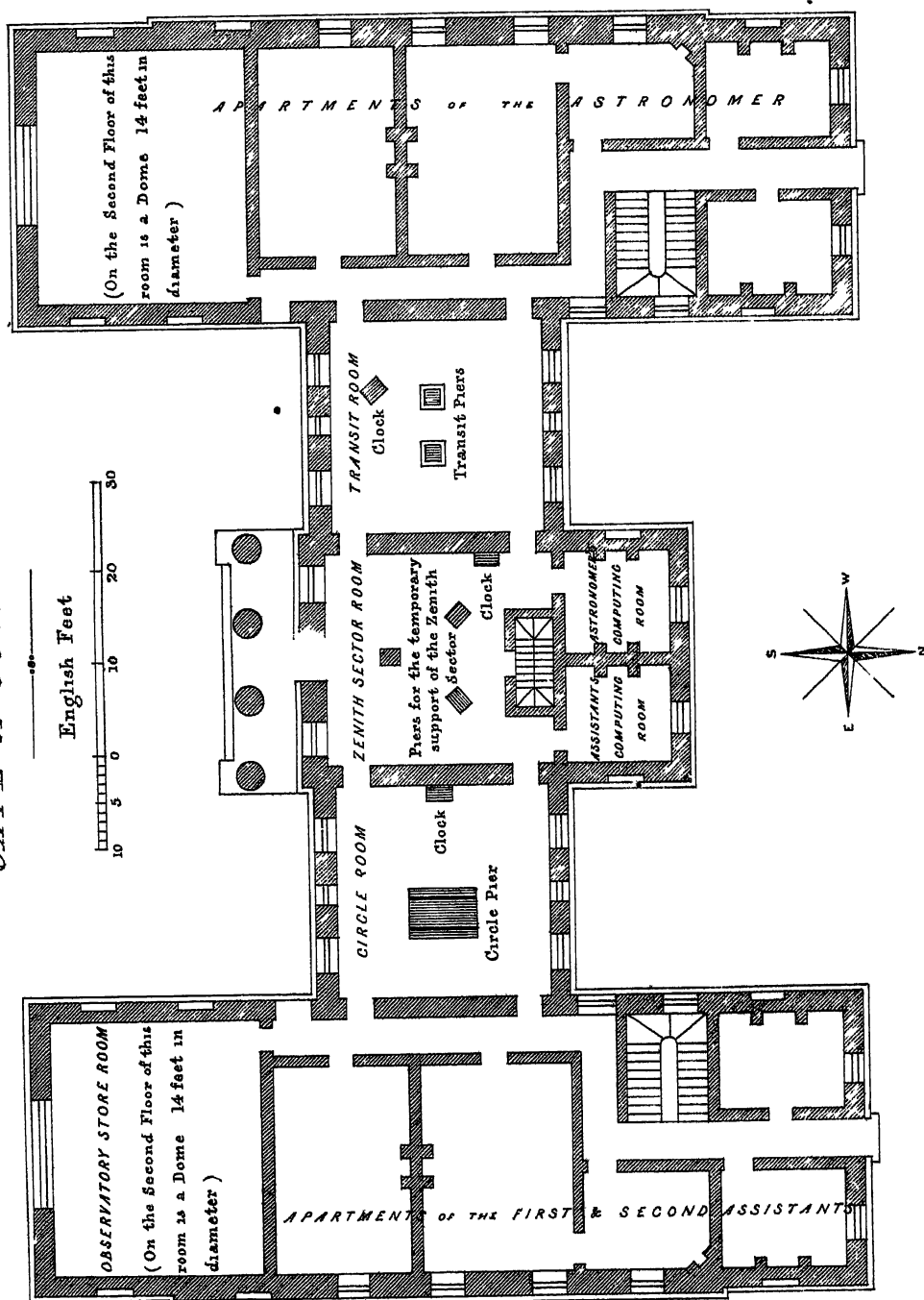
NB The Domes are planted upon the posts of the ceiling of the First-Floor Rooms, and are accessible only by ladders rising from the First Floor and through trap-doors in the ceiling

PAPERS.

I. *Results of the Observations made by the Rev.* FEARON FALLOWS, *at the Royal Observatory, Cape of Good Hope, in the Years* 1829, 1830, 1831. *Reduced under the Superintendence of* G. B. AIRY, *Esq., Astronomer Royal.*

Read Nov. 9, 1849.

HISTORICAL INTRODUCTION.

IN presenting to the Public the results of the first observations made at the Royal Observatory of the Cape of Good Hope, it may not be uninteresting to premise a brief account of its origin and early history, derived partly from official papers of every kind preserved at the Admiralty, which I have been permitted by the Lords Commissioners of the Admiralty to inspect, and partly from the Minutes of the Board of Longitude now in my custody.

The first official document relating to the institution of this Observatory is, I believe, the following Minute:—

" At a Meeting of the Commissioners appointed by Act of Parliament for more effectually discovering the Longitude at Sea, held at the Admiralty on Thursday the 3d of February, 1820:

" Present, Lord Viscount MELVILLE (First Lord of the Admiralty), the Right Honourable Sir JOSEPH BANKS, Bart. (President of the Royal Society), JOHN WILSON CROKER, Esq., JOHN BARROW, Esq. (Secretaries to the Admiralty), DAVIES GILBERT, Esq., M P., ROBERT WOODHOUSE, Esq., JOHN POND, Esq. (Astronomer Royal), Rev. Dr. ROBERTSON (Savilian Professor of

Astronomy), S. P. RIGAUD, Esq. (Savilian Professor of Geometry), Very Rev. Dean MILNER (Lucasian Professor), Rev. W. LAX (Lowndian Professor), Dr. WOLLASTON, Captain KATER, Major-General MUDGE (Resident Commissioners).

  *   *   *   *   *

" 9. Mr. GILBERT proposed that the Board should take into consideration the propriety of the establishment of an Observatory at the Cape of Good Hope, which he observed was likely to be highly conducive to the improvement of Astronomy. The motion was seconded by Sir JOSEPH BANKS, who gave it as his opinion that nothing could more essentially promote the glory of this country than to be the foremost in such an undertaking. The Committee of Instruments and Proposals, with the addition of Sir JOSEPH BANKS, Mr GILBERT, and Mr. POND, was desired to draw up a statement of the most eligible plan for such an Observatory, with an estimate of the probable expense. To meet on Thursday, the 17th, at 2 "

(It appears incidentally that the Committee of Instruments and Proposals above mentioned consisted of Dr. WOLLASTON, Captain KATER, General MUDGE, and Dr. THOMAS YOUNG.)

At the meeting of 1820, April 6, the following Report was brought up from the Committee.—

"Admiralty, 17th *Feb* 1820.

" The Committee resolved that, since a considerable time will be required for the establishment of a complete Observatory at the Cape, on account of the difficulties arising from the abundance of sand in most parts of the country, and from other local circumstances, the Committee therefore recommend the appointment of an Astronomer at the Cape as soon as a proper person can be found, and that he be sent out with portable instruments, in order to enable the Committee to form a better judgment of the arrangements that will be required; but that, in the mean time, the principal instruments be ordered to be put in hand for the Observatory, on the same scale as those at Greenwich, and as much as possible on the same construction."

The Committee was desired to continue their attention to the establishment of an Observatory at the Cape, and to procure estimates of the expense of the necessary instruments on the scale proposed, and to report to an Extraordinary Meeting of the Board in three weeks.

At the Meeting of 1820, April 27, the following Report of the Committee was presented :—

<div align="right">"<i>Thursday, 20th April,</i> 1820</div>

" The following Estimates were received from Messrs. TROUGHTON, DOLLOND, and JONES, for the Instruments required at the Observatory to be established at the Cape of Good Hope :—

			£.		
Mr TROUGHTON	A 25-feet Zenith Micrometer	..	300		
	Object-glass by DOLLOND	. .. .	100		
	Iron work by JESSOP and DONKIN	....	300	£	s
				700	0
Mr DOLLOND	A Transit		500		
	A Newtonian 7-feet Telescope, 9 in aperture .		210		
	Two 46-inch Achromatics, with various improved micrometers and extensive fields of view	..	315		
				1025	0
Mr JONES	A 6-feet Mural Circle . ... - .. .	.. .. .		787	10

<div align="right">TOTAL . £2512 10</div>

" The whole to be completed in two years, and a part of the payment to commence as the work goes on "

Mr. POND observed that the Equatoreal Sector now at Greenwich might be spared for the Cape, as well as a 6-feet Newtonian telescope by SHORT, which would supersede the necessity of a new reflecting telescope, and reduce the estimates to 2300*l.*

It was ordered that the respective artists should be desired to proceed in their undertakings without loss of time, and that the Committee should use their discretion from time to time respecting the advance of money to Mr. JONES and to Mr. DONKIN, in proportion only to the work actually performed.

These Minutes were communicated by Dr. YOUNG, Secretary of the Board of Longitude, to Mr. BARROW, Secretary of the Board of Admiralty, by letter dated 1820, July 22. The Board of Admiralty expressed in their Minute their entire concurrence in the proposal, and proceeded to make the requisite communications to the Treasury and the Colonial Office.

On 1820, October 9, Mr. GOULBURN, Secretary of the Colonial Office, addressed a letter to Mr. CROKER, Secretary of the Admiralty, stating that Earl BATHURST, his Majesty's Principal Secretary of State for the Colonial

Department, fully concurring in the view which the Board of Admiralty had taken of the expediency of erecting an Observatory at the Cape of Good Hope, had, in compliance with their Lordships' recommendation, instructed the Governor of the Cape to allot a suitable piece of ground for the purpose, at the expense of the Colonial Government, and in such a situation as the Astronomer whom their Lordships might send out may think fit and eligible, and moreover to lend every possible assistance towards carrying into effect the object in view.

Finally, the Observatory was established by the following Order in Council, dated 1820, October 20 :—

"At the Court at Carlton House,
the 20th October, 1820,

PRESENT,

THE KING'S MOST EXCELLENT MAJESTY
IN COUNCIL.

"Whereas there was this day read at the Board a Memorial from the Right Honourable the Lords Commissioners of the Admiralty, dated the 16th of this instant, in the words following, viz. —

"'The Board of Longitude having resolved that it would be highly conducive to the improvement of Practical Astronomy and Navigation that a permanent Observatory should be established at the Cape of Good Hope, which would afford a series of comparative observations made under circumstances the most favourable for correcting the unavoidable imperfections depending on the instruments employed and on the materials surrounding them, by a countervailing tendency to equal and opposite errors. And the Board of Longitude having on these grounds most earnestly recommended to us the establishment of such an Observatory at the Cape of Good Hope, and represented to us by their Secretary's letter of the 22d July last that the Instruments which would be required would cost, according to the best estimate they can form, about £2300, besides the expense of the Building itself, which cannot be estimated in this country, and that they would propose that the Establishment should consist of the Persons with the Salaries following, viz.

One Astronomer, £600 per Annum
One Assistant,   £250   ditto
One Labourer,   £100   ditto

" 'We beg leave with all humility to represent to Your Majesty that we concur with the Board of Longitude in the expediency of erecting an Observatory at the Cape of Good Hope, and that the Establishment of Persons with the Salaries proposed appears to us to be necessary and proper, and we, therefore, most humbly propose to Your Majesty, that Your Majesty would be graciously pleased by Your Order in Council to authorise us to cause an Observatory to be erected at the Cape of Good Hope accordingly; and to direct that the Establishment thereof shall consist of the Persons with the Salaries proposed by the Board of Longitude, the said Salaries to be placed on the Ordinary Estimate of the Navy.

" 'And we further with all humility represent to Your Majesty that Mr. LUSHINGTON has acquainted us by his letter of the 9th of August last, that the Lords Commissioners of the Treasury concur in the expediency of the measure and in the propriety of granting Salaries of the amount above-mentioned as an inducement to men of science to accept the situations proposed to be established.'

" His Majesty having taken the said Memorial into consideration was pleased, by and with the advice of his Privy Council, to approve of what is therein proposed, and doth hereby authorise the Lords Commissioners of the Admiralty to cause an Observatory to be erected at the Cape of Good Hope, and to order that the Establishment thereof should consist of the Persons with the Salaries therein mentioned, as proposed by the Board of Longitude; the said Salaries to be placed on the Ordinary Estimate of the Navy.

(Signed)   " JAS BULLER "

The Rev. FEARON FALLOWS, M.A., Fellow of St. John's College, Cambridge, was appointed to the office of Astronomer at the Cape of Good Hope by Admiralty Minute of 1820, October 26.

On 1820, Nov. 28, Dr. YOUNG wrote to Mr. BARROW, recommending Mr. FAYRER as First Assistant to Mr. FALLOWS. It is stated in this letter that Mr. FALLOWS and Mr. RENNIE (whom the Admiralty had consulted in quality of engineer) had agreed on the general plan of the Observatory. Apparently the plan then sketched is the same which was ultimately adopted, the

ground-plan being in the form of the letter H; the intermediate part containing the rooms for meridional observations; the wings containing the residences of the Astronomer and his Assistants, and being surmounted by domes for equatoreals.

On 1821, February 5, Dr YOUNG transmitted to Mr. BARROW the draft of Instructions for the Astronomer at the Cape Observatory, which (as was stated in the letter) had been drawn up by the Committee of the Board of Longitude appointed for the purpose. These Instructions, however, are not to be found in the Minutes of the Board of Longitude. They are as follows.—

" *Instructions*

" *For the Astronomer at the Cape Observatory.*

" 1. In the choice of the situation for the Observatory, he is to bear in mind the necessity of avoiding the sandy dust which pervades many parts of the Colony, and the advantage of having a bright star within a minute or two of the Zenith, if possible

" 2. Before the completion of the Observatory, he is to employ himself in making an approximate Catalogue of the Southern Stars with the portable Transit-instrument and Equatoreal which have been provided for him; and to take measures for determining the latitude of LA CAILLE's Observatory.

" 3. When the Observatory is completed, and the Instruments are fixed, he is to make his observations as much as possible of the same kind and in the same manner as the Greenwich Observations have been usually made; to employ the same stars where it can be done conveniently; and to draw up the register in the same form; in order that the whole may constitute two corresponding series capable of comparison in all their parts.

" 4. He is to pay particular attention to the rediscovery of the Comet of 1819, according to the places calculated by Professor ENCKE for 1822.

" 5. He is to neglect no opportunity of making any observations capable of improving the Theory of Refraction.

" 6. He is to send to the Secretary of the Board of Longitude every six months a correct copy of all his observations, prepared for publication " [in order that the same may be transmitted to our Secretary].

The Board of Admiralty approved of these Instructions, and directed

that they should be sent, with the addition of the last clause, to Mr. FALLOWS

At the Meeting of the Board of Longitude on 1821, February 1, " Mr. RENNIE's sketch for the Observatory at the Cape was approved, and it was resolved that he should be desired to prepare a plan in detail." This resolution was transmitted by Dr. YOUNG to Mr. BARROW on February 29 [perhaps February 9 or 19] The Board of Admiralty gave instructions, through the Navy Board, to take proper steps for building the Observatory, but to delay active measures until the site should be selected and approved.

I do not find any official record of the time of Mr. FALLOWS' departure for the Cape; but I shall shortly be able to supply this from another source.

At the risk of some repetition, I may here insert a short Memoir of the early life of Mr. FALLOWS, extracted from the Report of the Council of the Royal Astronomical Society to the Twelfth Annual General Meeting, 10 Feb., 1832 (*Memoirs*, vol. v. page 404).

" Mr. FALLOWS is an example, and, in this country, happily, not a solitary example, of the influence which talents and character may have on the fortunes of an individual under circumstances apparently the most untoward. He was born July 4, 1789, at Cockermouth, in the County of Cumberland; and his early years were spent in following his father's occupation, that of a weaver, with no further time or opportunity for education than could be afforded by the ordinary intervals of labour. Fortunately, his father was himself a man of considerable information and studious habits, and devoted those leisure moments to the education of his child, who thus became early acquainted with the principles of arithmetic and geometry,—subjects in which he chiefly delighted. When a mere boy, a mathematical book was his constant companion at the loom, and this taste was encouraged by the kindness of many persons in the vicinity, who supplied him with books, and with such assistance in his studies as they were competent to give. His father having become parish-clerk at the neighbouring church of Bridekirk, the extraordinary acquirements of the young mathematician became known to the Rev. Mr. HERVEY, vicar of that parish; and by the advice and recommendation of this gentleman, Mr. FALLOWS was engaged as an assistant by Mr. TEMPLE, at that time head-master of Plumbland School. On the death of Mr. TEMPLE, in 1808, Mr. HERVEY further exerted himself to obtain for Mr. FALLOWS the patronage of some gentlemen of fortune and interest, in

would be highly desirable that a more extended arc of the meridian should be measured near the Cape, and they beg leave to suggest, that if the Board of Longitude at large concur in this opinion, a Zenith Sector and a Theodolite, with proper chains and other apparatus for measuring a base, should be added to the list of instruments already ordered.

" III Mr. FALLOWS being in want of a good reflecting telescope, Captain KATER is requested to make inquiry respecting one which is said to be in the possession of Sir HENRY ENGLEFIELD, and which may probably be obtained. It was also resolved that inquiry be made respecting a telescope of Sir WILLIAM HERSCHEL belonging to the Observatory at Glasgow."

The opinion of the Committee was adopted, but it was agreed that for the present it was unnecessary to provide the instruments in question, subservient to the measurement of an arc of the meridian.

At the Meeting of 4th April, 1822, letters of Mr. FALLOWS to the Admiralty were communicated, announcing the appointment of Mr. SKULLY as second assistant, which the Board recommended the Admiralty to sanction ; and also stating that the proximity of a bright star to the zenith of Tiger Hill rendered it a desirable position for the Observatory.

In a letter from Mr. FALLOWS to Mr. BARROW, dated 1821, December 12, the want of a better clock than that now at the Cape, and the want of a large reflecting telescope, are urged   It appears also that Mr FALLOWS had begun to entertain doubts on the fitness of Tiger Hill for the site of the Observatory, as it was very frequently covered with clouds.

On 1822, March 8, Mr. FALLOWS wrote more decidedly to Mr. BARROW, intimating his positive abandonment of Tiger Hill.   The prevalence of sand-drift made it difficult to select a proper place, but he finally fixed on a spot between Liesbeck River and Zwait* River (as described in the map accompanying his letter).   This is the place on which the existing Observatory is built.   It appears that this letter was communicated to the Board of Longitude, as Dr. YOUNG, in a letter to Mr. BARROW dated 1822, July 4, conveys their approval of the change, although no mention of it is to be found in the Minutes of the Board of Longitude.

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* The proper name is Salt River.

On 1822, May 30, Mr. FALLOWS stated that Mr. FAYRER was about to quit him, and suggested that Mr. SKULLY should be appointed to succeed as first assistant. This was approved at a Meeting of the Board of Longitude on November 7, and sanctioned by the Admiralty.

At the Meeting of the Board of Longitude on 1823, November 6, Mr. FALLOWS' catalogue of 273 stars, made with the small instruments, and with the unsatisfactory clock to which I have alluded, was announced. The original observations were announced at the Meeting of 1824, February 5, and were ordered to be delivered to the Royal Society for preservation. [They have lately been transferred to the Royal Observatory, Greenwich, to be preserved with the other MSS to be mentioned hereafter.]

It would appear that at this time Mr. FALLOWS' position was not very agreeable. He was residing in a hired house, of so bad a construction (as, it appears, is frequently to be found at the Cape), that on one occasion the roof and a great part of the house fell in, his family escaping injury only by accidental absence. He had only inferior instruments, and was waiting vainly for large ones. The ground which he had selected as a site for the Observatory, supposed to be Government property, was claimed by three private persons, and was only obtained by negotiation, to the extent of $2\frac{1}{16}$ acres, about 1823, July 6; but even then no plan for building was received. Finally, on 1824, July 17, he found it absolutely necessary to dismiss Mr. SKULLY, and was thus left alone.

The astronomical interests of the Cape were not, however, neglected in England. At the Meeting of the Board of Longitude, on 1822, November 7, it was also resolved, that it would be proper to purchase for Mr. FALLOWS' immediate use a clock of Mr. HARDY then finished, and of which the price was 100 guineas. This clock was announced by Mr HARDY to the Secretary of the Admiralty as ready for shipment on 1822, December 17, and its price was paid on 1823, June 5. The bill for the mural circle was presented on 1826, September 5, that for the large transit instrument on 1826, September 22, and that for the Glasgow reflecting telescope (14 feet in focal length, and 12 inches in aperture, approved by the Board of Longitude) on 1826, November 2. I omit all notice of the small instruments which from time to time were sent to Mr. FALLOWS.

On receiving the notice of Mr. SKULLY's dismissal, it appears that the Board of Admiralty promptly consulted the Royal Society and the Astro-

Limb, apparently in the same position in which light has been seen by other observers.

In the *Philosophical Transactions* for 1824, page 457, is a " Catalogue of nearly all the principal Fixed Stars between the Zenith of Cape Town and the South Pole, reduced to the 1st of January, 1824," with a description of the instruments employed. This is the Catalogue to which allusion is made above, as having been announced at the meeting of the Board of Longitude on 1823, November 6. The small transit and the unsatisfactory clock are still, I believe, at the Cape Observatory. the altitude and azimuth instrument is at the present moment packed in cases at the Royal Observatory of Green-wich, but will shortly be delivered, with the sanction of the Admiralty, to the Observatory of the Greenwich Hospital Schools.

In the *Philosophical Transactions* for 1830, page 153, is an account of observations made with an invariable pendulum at the Cape of Good Hope. These observations were made between 1828, Nov. 23, and 1830, Jan. 22, by Mr. FALLOWS, Captain RONALD, and Mr. JOHNSON (now Radcliffe Observer at Oxford), in an out-house near the Cape Observatory.

To this list I may properly append the following singular meteorological observation, of which the original account is at the Admiralty, and which I believe has not been published. The principal part of the account was drawn up by Captain RONALD, and was inclosed by Mr. FALLOWS to the Secretary of the Admiralty.

Mr. FALLOWS to the Secretary of the Admiralty.

" *Royal Observatory, Cape of Good Hope, Nov.* 9, 1829

" Sir,—The inclosed document was drawn up at my request by Captain RONALD. At the moment the first explosion took place (ten in the evening,) I was writing in a room adjacent to that of the Transit, and imagined from the loudness of the report that it might be a signal of distress from some vessel in Table Bay Shortly after, perhaps four or five minutes, for I cannot be certain, having no suspicion of what had been observed in the Transit-room, I heard a second report, but it was somewhat fainter than the former. This phenomenon has been noticed at Simon's Town, Stellenbosch, and beyond Koe-berg.*

" I have, &c   FEARON FALLOWS "

* Koe-berg is in the same range of hills as Blue-berg and Tiger-berg.

(INCLOSURE)

Captain RONALD *to Mr.* FALLOWS

" Observatory, Cape of Good Hope, 20th October, 1829

" Sir,—As it may not be uninteresting perhaps to make some record of the circumstances attending the appearance of a Meteor which was observed last evening, I beg leave to convey to you the following notice : remarking that having seen it only through the open roof of the Observatory, which prevented me from following the direction it took, my report must necessarily be so far incomplete.

" At the time of the occurrence of the phenomenon in question, about 10 in the evening, I was in the Transit-room, engaged in observing the passage of a star, when a blaze of intensely vivid light was observed a little to the West of North, about the height of the Equator, and which continued for perhaps a couple of seconds

" While registering the observation, a loud report was heard nearly in the same direction, resembling that of a piece of heavy ordnance at the distance of two or three miles. The interval, between the flash and the report reaching me, must have been between the limits of $2^m 40^s$ and $2^m 45^s$, from the circumstance of my having observed the light just before the star (*g Ceti*) had come to the second wire* of the instrument, which, on referring to the transit-book, would have taken place at $23^h 57^m 47^s\cdot6$ nearly, and therefore the occurrence of the phenomenon may be safely referred to $23^h 57^m 45^s$; and as, on hearing the report, I immediately consulted the Sidereal Clock, which indicated $0^h \ldots$, I think that the error in assuming the elapsed time as above cannot be supposed to amount to five seconds.

" There was little peculiar in the state of the weather or atmosphere ; the day had been rather more than usually cool, the highest temperature being 65° Fahrenheit, the wind from the south, and moderate, with slight passing showers. The evening was nearly clear, with a light air from the south-west, atmosphere rather dry; the barometer standing at $30^{in}\cdot20$, and the thermometer at 52°, and both were observed to rise suddenly after the explosion, the barometer by $0^{in} 01$, and the thermometer by $0^\circ\cdot1$, though they regained their original position in a short time afterwards.

" I have, &c   W. RONALD

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* The transit of *g Ceti* (2 *Ceti*) over the second wire, on this day, is blank, and the word " meteor " is written in the margin   The first and third wires are $23^h 57^m 27^s 9$ and $23^h 58^m 7^s 4$.

"By referring to my Meteorological Journal, it appears that a meteor of somewhat similar appearance was noticed in Cape Town early on the morning of the 6th November last year.—W. R."

Of the history of the Manuscripts of Mr. Fallows' Observations since their arrival in England I am unable to give a complete account. I am aware that at the request of the Admiralty they were examined successively by two gentlemen of well-known astronomical ability, in reference to the publication of their results, but I am not aware of the circumstances which prevented the reduction of the results from being then completed.

The Manuscripts were placed in my hands in the spring of 1846, and on 1846, June 9, I wrote to the Admiralty, undertaking to superintend the reductions, and received from them the necessary powers on 1846, June 12.

The work has been carried on at intervals by the Computers usually employed on the Lunar Reductions, or on the supplementary computations of the Royal Observatory.

G. B. AIRY.

Royal Observatory, Greenwich,
      1849, October 23.   .

EXPLANATION OF THE REDUCTIONS

Results in Right Ascension.

The transit observations commence on 1829, April 11, and terminate on 1831, March 30.   Of these there are three copies, viz:

First. A copy on oiled tissue paper in three books, much dilapidated, including, however, only the observations from 1829, April 11, to 1831, February 17.

Secondly. A copy on oiled tissue paper in two books, much dilapidated, including all the observations.   In the first cover is written, in handwriting not Mr. Fallows', "3d or clean copy."   This is the copy which has been used in all the reductions made under my direction.

Thirdly. A copy on strong writing paper, including all the observations, and signed " Jas. Robertson."

The first and second copies are written by the use of carbonaceous paper and a hard style, but they have been written independently, sometimes in different handwritings   In both copies the carbonaceous paper has been sometimes placed on the upper surface of the tissue paper, and sometimes on the lower surface.   I believe that the mechanical copies of both are preserved at the Cape Observatory.

The transit instrument is the same which is still mounted at the Cape Observatory, and which is described by Mr. MACLEAR in the *Cape Observations,* 1834.   Its focal length is 10 feet, and the aperture of its object-glass 4·9 inches: it is the work of Mr. DOLLOND, and appears to be in every respect an admirable instrument.   It is furnished with 7 wires in the field of view, and these appear to have remained in the same state to 1834.   Mr. FALLOWS, however, observed only on 5 wires, and his books are ruled only for 5 wires.   It will, however, be seen hereafter, that, although he always intended to observe the transits on the 5 middle wires, he has occasionally (by a mistake which he has not himself detected) observed the transit on one of the extreme wires.

The only alterations which it has been necessary to make in the seconds of the recorded transits are the following —

1829, April 14, θ^2 *Argûs,* the III observed wire is increased 1^s
April 15, δ *Argûs,* all the wires are diminished 1^s
May   1, κ *Argûs,* the II observed wire is diminished 1^s
July   8, θ *Centauri,* the III observed wire is increased 2^s
Aug 28, γ *Pavonis,* the V observed wire is diminished 1^s
Sept 14, β *Indi,* the I. observed wire s increased 6^s
the IV observed wire is increased 5^s.
1830, July 14, Sun 1 L, the III. observed wire is increased 2^s
Oct 29, Sun 1 L, the V observed wire is diminished 10^s
Dec 30, Sun 2 L, the I observed wire is increased 1^s

Alterations of minutes have not been specially registered.

On 1829, September 23, ζ *Canis Majoris,* and β *Canis Majoris,* differing 10° in polar distance, are both observed, though the interval of time between the last wire of ζ *Canis* and the first of β *Canis* is only 3^s.

The following observations are rejected .—

1829, April   13, α^2 *Centauri.*
August 28, δ *Capricorni.*
1830, March 19, σ *Sagittarii.*

1830, July   7, *α Libræ*
August 1, 25 *Clypei Sobieski*
Oct   21, a star taken by mistake for *Vesta*, and insufficiently defined in
north polar distance
Some small stars observed on single wires at the beginning of 1830
Two stars on 1830, August 4, for which there are no means of identification

When transits were observed on five wires, Mr. FALLOWS has always given the mean in a column entitled "Reductions," but no reduction is given for the imperfect transits   The reductions of the complete transits have been examined under my direction, those of the incomplete transits have been supplied in the following manner.   In one of Mr. FALLOWS' books (principally appropriated to the adjustments of the transit instrument and the clock), sufficient information as to the east or west position of the illuminated end of the transit was obtained.   Then from 51 observations of β *Hydri* above the pole, and 36 observations below, the intervals of wires for β *Hydri* were found, and were reduced to the values corresponding to an equatoreal star. The results were as follows, the illuminated end of the axis being east.   Mr. MACLEAR's corrections are taken from the introduction to the *Cape Observations, 1834.*

Correction to the transit over each wire, to reduce it to the mean of wires, Illuminated End East.

Maclear's Numeration	Fallows' Numeration	Correction	Maclear's Correction
1		s	+55 962
2	I	+37 309	+37 349
3	II	+18 656	+18 671
4	III	+ 0 004	+ 0 008
5	IV	−18 655	−18 635
6	V	−37 313	−37 364
7			−55 991

The numbers in the first column of corrections have always been used in the reductions of imperfect transits, except when transits on the first or seventh wire have been inadvertently observed, in which instances the numbers of the second column have been used.

The following are the instances of observation of the first or seventh wire :—

1829, April 14, *θ Centauri*   The wires, in the order of observation, are 3, 4, 5, 6, 7
April 14, *α² Centauri*   The wires are 4, 5, 6, 7
Sept 14, *ε Gruis*. The wires are 1, 2, 3, 4, 5

And where the intervals between two neighbouring stars have been observed, the wires used have commonly been the first and the seventh.

After deducing from all the wires observed the transit over the mean of the five wires, the next step was to examine into the value of the error of collimation of that mean, or (which is sensibly the same thing) of the error of collimation of the middle wire In Mr. FALLOWS' adjustment-book the following remarks are found ·—

" 1829, June 13, at nearly 5 o'clock P.M Reversed the transit several times, and found the collimation so nearly correct that it was considered advisable not to change or alter the collimation screws.

" 1829, July 3 The collimation was found correct.

" 1829, August 4, 4 P M. Reversed the instrument; examined the collimation, which proved almost as nearly correct as possible. The minutest adjustment took place.

" 1829, Sept. 1. Reversed the transit. .... The collimation was found very nearly correct by a mark on the upper part of the pillar.

" 1829, Dec. 31. The collimation correct by reversion with the meridian mark The centre wire is, if anything, a *little* to the right hand.

" 1830, March 2 and 3. The transit reversed; collimation correct.

" 1830, July 9. Examined the pivots of the transit. When the instrument was horizontal, no error. A slight error of $0''\cdot2$ appeared when the instrument was about 45° altitude, the object-glass being toward the south. This minute quantity ought *perhaps* to be attributed to the level itself. No error could be perceived when the object end was about 45° to the north. In fact, the discrepance $0''\cdot2$ might arise from the observatory door being suddenly opened at that time. I therefore did not deem it prudent to grind the pivots

" 1830, July 9 and 10. Collimated the transit with the greatest care by our north meridian mark, and left the centre wire exactly bisecting the dot.

" 1831, Jan. 16. The collimation by the N. and S. marks was quite correct."

It is evident from these notes that Mr. FALLOWS was very careful in examining the error of collimation and the forms of the pivots, and also that the instrument was very firm; and there cannot be the smallest doubt on the propriety of reducing the observations in the way in which he had intended to reduce them himself, namely, by assuming that the error of collimation was insensible, and that the pivots were truly circular.

The next element of reduction is the error of horizontality of the axis of the transit. Notices of the application of the level are found on the following days .—

1829, April 28, 29, May 25, June 13, 15, July 3, August 3, 4, Sept. 1, Nov 18, Dec. 31, 1830, March 2 and 3, April 12, May 5, July 9, 10; 1831, Jan. 16, 19.

On 1831, Jan. 16, the level was applied before and after reversing the transit, the results are sensibly the same, shewing that there was no sensible difference between the pivots.

Mr FALLOWS had deduced, from these applications of the level, the level-error of the transit, and had (in a subsequent stage of the reductions) applied the corresponding corrections to the transits of the stars, as far as 1830, March 31. In order to examine the accuracy of these corrections, the names of the stars were placed by me in the order of south polar distance, and opposite to them were placed, in separate columns, the corrections applied by Mr. FALLOWS during separate periods through each of which one constant level-error might be supposed to exist The order of arrangement which I have described enabled me to discover a few errors. When these were corrected, Mr. FALLOWS' numbers were used as far as 1830, March 31. After this time the error of level is generally insensible (the discordance of results obtained on the same day considerably exceeding the mean of the results), and therefore no further attempt at correction for this error is made.

The next element of reduction is the azimuthal error of the transit. The book of adjustments to which I have alluded contains occasional investigations of the amount of this error, principally from observations of β *Hydri,* but sometimes from other stars, and occasional notices of the shifting of the meridian mark. The last notice is on 1830, July 13 . "Adjusted the dot on the south meridian mark, so as to be accurately bisected by the centre wire of the transit." I imagine that, at this time, Mr. FALLOWS was perfectly satisfied with the position of the instrument, and with the position of the mark then fixed by it, and that he afterwards adjusted the transit in all cases upon the dot so fixed, and assumed it to have no azimuthal error. Up to 1830, March 31, corrections for azimuthal error are applied; these were examined under my direction in the same manner as those for level-correction, and some errors were found. After that time I have supposed that (from the evidence given by the few observations of β *Hydri,* and from the subsequent fixation of the meridian mark) the azimuthal error was zero; at

any rate, it is impossible to use any satisfactory astronomical determination of its amount, because the observations of β *Hydri* cease in the spring of 1830.

These corrections being applied, the true clock time of transit over the meridian was found

The next step was, to investigate the clock-errors from comparison of clock-transits with tabular right ascensions of clock-stars. Mr. FALLOWS had investigated and applied the clock-errors as far as 1830, March 31, and had even made considerable progress in reducing the results to the form of Ledger, the results for each star being collected together. His principle was, to use a single star for the determination of clock-error for the correction of each transit His only clock-stars were α *Orionis, Procyon,* α *Aquilæ,* and in a small number of instances, *Spica* and *Antares* In estimating the propriety of this method of proceeding, it is to be remarked, that no good catalogue of stars existed at that time of a later epoch than 1800, and that it would have been difficult for Mr FALLOWS to adopt any other course which would enable him with facility to correct the results for the errors which might probably exist in the assumed fundamental places. But I think it perfectly certain that if Mr. FALLOWS had lived to reduce his observations at the present time, he would have availed himself of some of the accurate catalogues which have been published since 1830. In the full belief, therefore, that I was doing only what Mr. FALLOWS himself would have done, I rejected his clock-reductions entirely, and investigated anew the clock-errors, adopting as basis the places of the *Tabulæ Regiomontanæ.*

The method which I adopted was nearly the same as that used by me in the Planetary and Lunar Reductions. All the stars of the *Tabulæ Regiomontanæ* which could conveniently be combined in one group were used for the formation of the clock-errors. Thus, on some days the adopted clock-error was the mean of the clock-errors given by ten or more stars. If only one or none of the stars of the *Tabulæ Regiomontanæ* had been observed, small stars were selected which were to be found both in the catalogue of BRADLEY (*Fundamenta Astronomiæ*) and also in that of POND or PIAZZI, and they were used as clock-stars. It was evidently necessary, in general, to investigate the proper motion of these stars, that was done by bringing up the right ascension of BRADLEY to the epoch of POND or PIAZZI (as the case might be), using the same elements of precession as those which were to be

used in afterwards computing the star's apparent place, and comparing the right ascension so brought up with that of POND or PIAZZI. About two-thirds of the small stars thus used were found in POND's catalogue; and POND's places were then used in preference to PIAZZI's. With these proper motions and the precessions of the *Fundamenta*, the stars' mean right ascensions were formed; and the variable corrections were computed by the use of the log A, log B, &c., given in the *Tabulæ Regiomontanæ*, and quantities equivalent to the log *c*, log *d*, log *a*, log *b*, of the Royal Astronomical Society's Catalogue. The whole number of right ascensions of the Fundamental Stars of the *Tabulæ Regiomontanæ* used for clock-error is about 660, and that of small stars about 400.

The comparison of these tabular right ascensions with the true clock-time of transit gave the clock-error as shewn by each individual star   The clock-errors were divided into 352 groups, each group usually corresponding to one day's observations: the mean of the clock-errors of each group was held to be a clock-error corresponding to the mean of the times of transit, the comparison of successive means gave an apparent rate of the clock between successive groups; and from these a rate was adopted for each group.   The clock-rate was generally steady   on two occasions the change between two successive days amounted to nearly $0^{s}\cdot4$, but I believe that on no other occasion did it reach half that quantity.   A fictitious clock-error was then formed for 0^{h} sidereal, in the same manner as in the *Greenwich Observations*.

The clock-error at 0^{h} and the proportional part of the clock-rate were then applied to every true clock-time of transit, and thus an apparent right ascension as given by observation was formed.   But no result was retained for a clock-star, unless there were at least three clock-stars in the group.

From these apparent right ascensions of stars, the mean right ascensions for the beginning of the year of observation are found by applying backwards the star-corrections   For the principal stars of the *Tabulæ Regiomontanæ*, these are found by subtracting the mean right ascension from the apparent right ascension.   For the other stars a mixed course was pursued.   Mr. FALLOWS had computed star-corrections for nearly all the first-observed stars, as far for the most part as 1830, March 31: the results only, however, are given in the papers which have come into my hands.   It was necessary to verify these, and also to alter them, if the difference was sensible, to what they would have been if computed on the elements of the *Tabulæ Regio-*

montanæ. The plan, therefore, pursued by me was, to compute (by the log A, B, C, D of the *Tabulæ Regiomontanæ,* and log *c, d, a, b* of the Royal Astronomical Society's Catalogue, or equivalent formulæ) the star-correction for one, two, or three days, in each group of results for any one star. The difference between these corrections and Mr. FALLOWS' corrections was taken, and then it was very easy to form differences for all the other days of observation through the group of results; which differences, being applied to Mr. FALLOWS' corrections, gave the corrections that would have been obtained by immediate use of the *Tabulæ Regiomontanæ.* For all observations in which the corrections had not been computed at all by Mr. FALLOWS, the corrections were computed independently for every separate observation.

The mean places of the stars from observation having been thus found for the beginning of the year of observation, those which were referred to 1829 or 1831 were reduced by application of one year's precession to 1830; the same elements of precession being used as those adopted in the catalogue, to be hereafter explained. And thus the Ledger of Results in Right Ascension for every separate observation of the stars was completed.

At the end of these results of absolute right ascensions are placed some results of difference of right ascension, in the form in which they are given by Mr. FALLOWS, and requiring no further reduction.

The formation of the right ascensions of the sun, moon, and planets, requires no further explanation, except what will be with greater propriety connected with the tables of their places in right ascension and north polar distance.

Results in North Polar Distance.

Of the circle observations there is but one copy, in two books, on oiled tissue paper, commencing 1830, April 2, and terminating 1831, March 30. The first book is headed "Extracts from the Mural-Circle Book of the Royal Observatory, Cape of Good Hope;" but I have no reason to think that any observations were made in series, other than those contained in these papers. A book of adjustment contains numerous readings of the microscopes from 1829, Feb. 20, to 1830, March 24, but they are experimental only, excepting on three days intended to fix the place of a comet.

Argûs α, continued

1829	h m s
May 2	6 20 10·61
11	10·73
12	10·53
13	10·63
14	10·70
19	10·53
21	10·74
22	10·43
June 18	10·19
Sept 13	10·73
14	10·43
17	10·91
24	10·67
Nov 26	10·25
27	10·42
Dec 3	10·52
11	11·02
1830	
Feb 25	10·67
1831	
Jan 26	10·49
27	10·42
31	10·56
Feb 2	10·25
3	10·59
4	10·12
5	10·52
11	10·61
12	10·66
13	10·32

{ Piazzi VI — 135 } { B A C 2116 }

1830	h m s
Jan 7	6 22 23·03
Feb 4	23·30
Dec 29	23·29

24 Geminorum γ

1830	h m s
Feb 4	6 27 53·49

26 Geminorum

1830	h m s
Jan 8	6 32 30·16
Feb 4	30·44

Argûs ν

1829	h m s
April 27	6 32 33·70
May 2	33·56
11	33·58
12	33·43
13	33·59
19	33·57
21	33·63
Sept 13	33·56
16	33·67
21	33·68
Nov 25	33·27
26	33·47
Dec 3	33·43
1830	
Feb 23	33·68
25	33·57
26	33·62

9 Canis Majoris α

1829	h m s
April 13	6 37 39·22
15	39·43
17	39·16
20	39·37
21	39·30
27	39·20
May 2	39·27
11	39·21
12	39·20
13	39·34
14	39·34
19	39·11
21	39·24
22	39·31
June 15	39·54
18	39·37
July 12	39·28

9 Canis Majoris α, cont

1829	h m s
July 13	6 37 39·29
14	39·31
15	39·23
16	39·25
20	39·38
21	39·24
22	39·24
Aug 10	39·45
12	39·30
Sept 13	39·31
14	39·30
17	39·32
21	39·31
23	39·18
24	39·20
27	39·38
Nov 25	39·24
26	39·20
Dec 3	39·27
1830	
Feb 23	39·42
25	39·35
1831	
Feb 5	39·26

33 Geminorum

1829	h m s
Dec. 11	6 40 2·26

13 Canis Majoris κ.

1829	h m s
July 21	6 43 29·34
22	29·38
Sept 13	29·24
16	29·46
Nov. 25	29·34
Dec 3	29·36
1830	
Feb. 23	29·45
25	29·60

{ Piazzi VI — 270 } { B A C 2265 }

1830	h m s
Jan 8	6 46 23·12
Dec 29	23·13

{ Piazzi VI — 294 } { B A C 2280 }

1830.	h m s
Jan 8	6 50 4·57

21 Canis Majoris ε

1829	h m s
April 15	6 51 56·81
17	56·97
21	56·63
27	56·77
May 12	56·61
13	56·65
14	56·71
19	56·67
22	56·69
June 15	56·93
July 21	56·55
22	56·60
Aug 10	56·73
12	56·77
Sept 13	56·58
16	56·73
22	56·62
23	56·72
24	56·66
Nov 25	56·58
Dec 3	56·62
1830	
Feb 4	56·64
25	56·80
26	56·81

22 Canis Majoris

1829	h m s
July 21	6 54 56·79
22	56·69

22 Canis Majoris, *cont*			
1829	h	m	s
Aug 10	6	54	56 75
12			56 73
Sept 13			56 76
16			56 79
21			56 64
1830			
Feb 23			57 08
25			56 95
26			56 98

23 Canis Majoris γ			
1829			
Nov 25	6	56	3 94
Dec 3			3 94
1830			
Feb. 4			4 05

45 Geminorum			
1830			
Jan 8	6	58	36 65

* N P D. 71° 27'			
1830			
Mar 31	6	58	42 09

25 Canis Majoris δ			
1829			
July 22	7	1	28 70
Sept. 13			28·66
16			28 81
17			28 90
23			28 79
24			28 77
Nov 25			28 29
Dec 3			28 73

25 Canis Majoris δ, *cont*			
1830	h	m	s
Feb 4	7	1	28 73
23			28 75
25			28 95
26			28 87

54 Geminorum λ.			
1829			
Nov 14	7	8	19 12
Dec 11			19 20
1830			
Feb 4			19 15
5			19 06

Argûs π			
1829			
April 17	7	11	8 33
21			8 31
May 12			8 22
13			8 33
14			8 20
Aug 10			8 36
12			8 35
Sept 13			8 27
16			8 33
17			8 50
Nov 25			8 29
Dec 3			8 24
1830			
Feb 26			8 36
1831			
Feb 5			8 04
12			8 42
13			8 22
17			8 26

31 Canis Majoris η			
1829.			
April 17	7	17	22 28
21			22 25

31 Canis Majoris η, *cont*			
1829	h	m	s
May 12	7	17	22 23
13			22 27
14			22 25
June 15			22 41
Aug 10			22 32
12			22 36
Sept 13			22 52
16			22 65
17			22 74
Nov 25			22 14
Dec 3			22 17
1830			
Feb 23			22 31
26			22 25

Argûs σ			
1829			
Sept 13	7	23	50 22
16			50 24
Nov 25			50 01
Dec. 3			50 08
1830			
Feb 4			50 35
23			50 27
26			50 30
27			50 17

68 Geminorum			
1829			
Nov 14	7	23	53 93
1830			
Feb. 5			53 75
Mar. 31			53 98

74 Geminorum f			
1830			
Feb. 5	7	29	38 89

10 Canis Minoris α			
1829	h	m	s
April 11	7	30	23 77
17			23 79
24			24 05
30			23 93
May 1			23 89
2			23 81
11			23 76
12			23 75
13			23 81
14			23 80
15			23 76
19			23 82
25			23 82
June 18			24 06
Aug 10			23 81
12			23 80
Sept. 13			23 87
15			23 88
17			24 01
19			23 92
23			23 87
24			23 91
25			23 85
26			23 86
27			23 67
Oct 1			23 85
2			23 87
5			23 83
Nov 14			23 86
25			23 87
Dec 3			23 84
1830			
Feb 4			23 90
23			24 05
25			23 92
Mai 6			23 83
9			23 84
11			23 76
Aug. 11			23 82
12			23 85
Sept. 15			23 92
21			24 00
1831			
Feb 13			23 75

10 Canis Minoris α, cont

1831	h m s
Mar 7	7 30 23 79
15	23 83
16	23 90
17	23 91
21	23 82
22	23 83
23	23 98
26	23 93
27	23 90
28	23 96
29	23 93

Puppis c.

1830	
Feb 25	7 39 11 88
27	11 86

Puppis P

1830	
Feb 23	7 44 3 58
25	3 58
26	3 50

1 Cancri.

1830	
Feb 5	7 47 19 59

{ Piazzi VII—261 } { B A C 2649 }

1830	
Dec. 30	7 48 49 04

5 Cancri

1830	
Jan 9	7 51 48 09
April 1	48 29

Argûs χ

1829	
April 21	7 52 27 13
24	27 10

Argûs χ, continued

1829	h m s
May 1	7 52 27 18
12	27 16
13	27 00
14	27 09
15	27 06
25	27 06
Nov 25	27 07
1830	
Feb 4	27 20
23	27 24
25	27 07
26	27 02
1831	
Feb 17	26 99

Argûs ζ

1829	
April 17	7 57 36 69
20	36 71
21	36 51
24	36 46
May 1	36 56
12	36 56
13	36 61
14	36 47
15	36 49
22	36 60
25	36 58
Nov 25	36 52
1830	
Feb 4	36 54
23	36 70
25	36 60
26	36 61
27	36·60

Argûs γ

1829.	
April 17	8 4 17 43
20	17 38
21	17 32
24	17 42
May 12	17 65

Argûs γ, continued

1829	h m s
May 13	8 4 17 54
14	17 40
15	17 48
19	17 42
22	17 36
Nov 25	17 32
1830.	
Feb 4	17 42
23	17 56
25	17 47
26	17 37

Puppis q.

1830	
Feb 23	8 12 11 73
25	11 60
26	11 72
27	11 72

Argûs ι.

1829	
April 11	8 19 1 02
13	0 88
16	0 73
20	0·72
21	0 73
24	0 85
May 1	0 71
12	0 94
14	0 79
15	0 70
Nov. 25	0 77
1830	
Feb 4	0 82
23	0 80
25	0 74
26	0 71
27	0 66
1831.	
Feb. 17	0 74

29 Cancri.

1830	h m s
April 1	8 19 7 40

Volantis β

1830	
Feb. 26	8 23 51 49

{ Mali b } { Pixidis Nauticæ β }

1830	
Feb 23	8 33 27 01
25	26 95
26	27 08
27	26 92

{ Piazzi VIII—148 } { B A C. 2941 }

1830	
Feb 4	8 34 4 80

{ Mali a } { Pixidis Nauticæ α }

1830	
Feb 23	8 36 45 90
25	45 78
26	45 91
27	45 70

50 Cancri A²

1830	
Mar. 6	8 37 36 45

Argûs δ

1829	
April 13	8 40 0 27
14	0 44
15	0 37
16	0 39
17	0 27
20	0 54
21	0 47

Argus δ, continued.

	h	m	s
1829.			
April 24	8	40	0 52
30			0 16
May 1			0 72
14			0 33
Nov. 25			0 11
1830.			
Feb. 1			0 21
23			0 24
26			0 43
1831.			
Feb. 17			0 49

65 Cancri α

	h	m	s
1830.			
Mar. 6	8	49	10 84

Cancre δ¹

	h	m	s
1830.			
Feb. 4	8	52	48 32
26			48 40

Cancre δ²

	h	m	s
1830.			
Feb. 4	8	55	13 50

76 Cancri x

	h	m	s
1830.			
Mar. 6	8	58	31 89

Argus λ.

	h	m	s
1829.			
April 13	9	1	44 91
14			44 84
16			44 79
20			45·10
21			44 83
24			44 79
30			44 79

Argus λ, continued

	h	m	s
1829			
May 1	9	1	44 94
2			44 84
12			44 79
14			44 88
15			44 77
Nov 25			44 67
1830			
Feb 25			44 78

{ Piazzi IX—35 }
{ B A C 3164. }

	h	m	s
1830			
April 2	9	8	37·57

Argus β

	h	m	s
1829			
April 11	9	11	18 50
14			18 08
16			17 98
20			17 83
21			17 67
24			17 59
30			17 97
May 1			17 86
2			17 78
11			18 36
12			17 81
14			17 83
15			17·68
25			17 88

Argus ι

	h	m	s
1829			
May 19	9	12	32 00

{ Mali h.
{ Pixidis Nauticæ θ. }

	h	m	s
1830			
Feb 25	9	13	58 48
26			58 37
Mar 26			58 20

Argus x

	h	m	s
1829			
April 14	9	16	50 95
20			51 10
21			51 08
24			51 03
30			51 35
May 1			50 96
2			51 09
11			50 91
14			50 84
22			51 04
25			51 07

30 Hydræ α.

	h	m	s
1829			
April 13	9	19	13 97
May 11			13 84
12			13 93
14			13 82
15			13 88
19			14 12
25			13·95
1830			
Feb 4			14 02
25			14 13
26			14 22
Mar 22			14 06
23			13 87

6 Leonis h

	h	m	s
1830.			
April 3	9	22	50 61

14 Leonis o

	h	m	s
1830			
April 3	9	32	4 08

Argus v

	h	m	s
1829			
April 20	9	42	51 02
21			50 85
24			50 97
29			51 10
30			50 90

Argus v, continued

	h	m	s
1829			
May 1	9	42	51 03
2			50 62
11			50 92
12			51 13
13			50 98
14			50 80
15			50 82
19			50 76
22			50 99

29 Leonis π

	h	m	s
1830			
Feb 8	9	51	13 41

31 Leonis A

	h	m	s
1830			
Feb 8	9	58	52 56
April 3			52 58

32 Leonis α

	h	m	s
1829			
April 11	9	59	18 56
May 11			18 72
1830.			
Mar 6			18·58

16 Sextantis.

	h	m	s
1830			
April 4	10	0	19 88

{ Piazzi X—51. }
{ B A C 3538 }

	h	m	s
1830			
May 1	10	13	15 96

43 Leonis.

	h	m	s
1830.			
April 4	10	14	6 31

44 Leonis

1830	h m s
Mar 7	10 16 17 39

32 Sextantis

1830	
Mar 8	10 23 28 33

49 Leonis

1830	
F b 8	10 26 6 33

35 Sextantis

1830	
Mar 8	0 34 31 21

Argûs θ.

1829	h m s
April 13	10 36 54 58
14	54 85
16	54 76
21	54 40
29	54 87
30	54 48
May 1	54 48
2	54 53
11	54 68
12	54 98
14	54 55
15	54 41
22	54 54
25	54 52

37 Sextantis

1830	
May 1	10 37 14 45

Argûs η

1829	
April 11	10 38 29 28
20	28 47
24	29 11

Argûs μ

1829	h m s
April 29	10 39 28 97
May 2	28 55
25	28 55

7 Crateris α

1829	
April 20	10 51 29 78
21	29 82
24	29 61
29	30 09
30	29 80
May 1	29 64
2	29 74
11	29 80
14	29 96
15	29 92
22	29 77
25	29 93
June 18	29 73

59 Leonis c

1830	
Mar 8	10 51 55 92
April 4	55 70

65 Leonis p³

1830	
Feb 9	10 58 13 80
Mar 9	13 88
April 5	13 79

11 Crateris β

1829	
April 30	11 3 18 38
May 1	18 36
2	18 34
12	18 65
14	18 34

11 Crateris β, *continued.*

1829	h m s
May 15	11 3 18 22
22	18 31
25	18 25
June 18	18 21

75 Leonis.

1830	
Mar 9	11 8 32 40

Centauri π

1829	
April 29	11 13 17 15
30	16 77
May 2	16 92
12	17 10
14	17 09
15	16 88
19	16 94
22	16 87
25	16 99
June 15	16 64
18	16 36

79 Leonis

1830	
Mar 9	11 15 18 91

80 Leonis.

1830	
Feb 9	11 17 5 70

{Piazzi XI—77 / B A C 3901.}

1830	
May 3	11 19 12 42

Centauri λ

1829	h m s
April 20	11 27 58 92
21	58 99
22	59 13
24	59 03
29	59 15
30	58 88
May 1	59 04
11	58 84
12	58 96
14	59 09
15	58 86
25	58 76
June 15	58 33
18	58 09

94 Leonis β

1829	
April 11	11 40 22 87

{Piazzi XI—172 / B A C 4015}

1829	
April 29	11 44 20 57
30	20 32
May 1	20 50
2	20 24
11	20 35
12	20 33
14	20 52
15	20 20
June 15	20 17
18	20 06

{Piazzi XI—213 / B A C.4054.}

1830	
Mar. 10	11 52 19 64
April 6	19 59

{ Piazzi XI—230 / B A.C 4077 }

	h m s
1830 Mar 10	11 57 17.81
April 6	17 59

B A C 4085

1829	h m s
April 24	11 59 19 23
29	19 34
May 1	19 19
2	19 12
5	19 30
7	19 12
11	19 37
12	19 28
June 15	18 76
18	18 76

Centauri δ

1829	h m s
April 13	11 59 35 23
14	35 05
20	34 99
21	34 83
23	35 35
24	35 12
29	35 35
30	35 22
May 1	35 12
2	35 01
5	35 21
7	35 19
11	35 24
12	35 33
14	35 23
15	35 07
June 15	34 67
18	34 45

Crucis δ

1829	h m s
April 13	12 6 10 19
14	10 08
16	9 78
20	10 03
21	9 86

Crucis δ, *continued*

1829	h m s
April 23	12 6 10 08
24	10 12
29	10 34
30	10 10
May 1	10 11
June 18	9 25

4 Corvi γ.

1829	h m s
April 11	12 7 4 53
May 2	4 37
11	4 66
12	4 57
14	4 53
15	4 40
25	4 49
June 15	4 45

Chamæleontis β

1829		h m s
Aug 26	SP	12 8 33 05
28	SP	33 00
Sept 2	SP	32 95
3	SP	32 63
6	SP	32 80
7	•	33 50
7	SP	32 74
12	SP	32 48
13	SP	32 86

13 Virginis

1830	h m s
May 3	12 9 57 46

{ Piazzi XII—65 / B.A C 4172 }

1830	h m s
April 7	12 14 31 48

Crucis α

1829		h m s
Oct 27	SP	12 17 12 66

7 Corvi δ

1829	h m s
May 22	12 21 4 74

Crucis γ

1829		h m s
April 21	•	12 21 47 15
May 2		47 04
15		47 14

{ Piazzi XII—111 / B A C 4225 }

1830	h m s
April 7	12 22 54 67

9 Corvi β

1829	h m s
April 14	12 25 28 21
20	28 20
21	28 34
24	28 35
29	28 40
30	28 31
May 1	28 34
2	28 31
11	28 58
12	28 55
15	28 39
22	28 26
June 15	28 27
17	28 28
18	28 17

{ Piazzi XII—143 / B A C 4255 }

1830	h m s
April 7	12 29 59 38
May 4	58 96

Centauri γ

1829	h m s
April 23	12 32 10 78
24	10 74
28	10 71
29	10 99
30	10 79
May 1	10 85
2	10 79
5	10 95
7	10 87
8	10 71
11	11 03
12	11 06
14	11 09
15	10 90
22	10 86
June 15	10 55

29 Virginis γ^1

1830	h m s
Mar 10	12 33 2 97

Crucis β

1829	h m s
April 13	12 37 51 20
14	51 05
16	50 88
20	50 93
21	50 85
24	51 04
28	50 65
29	51 01
30	50 79
May 1	51·10
2	50 92
11	51 17
12	51 27
14	51 34
15	50 96
22	51 09
June 15	50 46

{ Piazzi XII—183 } { B. A C 4294 }

1830.	h	m	s
April 7	12	38	46 72

45 Hydræ ψ

1829.	h	m	s
April 24	12	59	54 94
29			55 10
30			54 96
May 1			54 88
2			54 85
11			55 05
12			55 07
14			55 02
15			54 80
25			54 85
June 15			54 91
17			54 78
18			54 69
July 8			54 75

Centauri ι

1829	h	m	s
April 13	13	11	4 23
14			4 33
20			4 15
21			4 09
23			4 32
24			4 31
28			4 17
29			4 41
30			4 14
May 2			4 12
11			4 42
12			4 46
14			4 49
25			4 22
June 15			3 99
17			3 86
18			3 98
July 7			4 04
8			4 08
9			3 99
13			4 23

* N P D. 125° 49'±

1829	h	m	s
May 1	13	12	2 26

67 Virginis α.

1829	h	m	s
April 13	13	16	14 74
14			14 91
20			14 88
21			15 00
24			14 94
29			15 09
30			14 92
May 1	•		14 92
2			14 81
11			15 11
12			15 13
14			15 04
15			15 04
22			14 84
25			14 85
June 15			14 91
17			14 95
18			14 64
July 7			14 81
8			15 04
9			14 88
13			14 83
14			14 86
Sept 14			14 75
15			14 82
17			14 83
20			14 86
24			14 86
26			14 88
27			14 82
Oct 1			14 84
2			14 80
1830 Sept 15			14 89
16			14 80
19			14 92
21			14 69
22			14 81
29			14 70
Oct 1			14 75

67 Virginis α, *continued*

1831	h	m	s
Mar 7	13	16	14 76
15			14 85
16			14 94
17			14 84
22			14 58
26			14 78

77 Virginis

1830	h	m	s
April 8	13	24	32 25

Centauri ε

1829	h	m	s
April 13	13	29	10 35
14			10 50
20			10 36
21			10 17
23			10 25
24			10 38
28			10 37
29			10 51
30			10 26
May 1			10 39
2			10 46
11			10 74
14			10 53
15			10 39
22			10 33
June 18		•	9 90

Centauri ζ

1829	h	m	s
April 13	13	44	58 73
14			58 66
20			58 69
21			58 55
23			58 73
24			58 76
28			58 76
29			59 02
30			58 65
May 1			58 78
2			58 73
11			59 03

Centauri ζ, *continued.*

1829	h	m	s
May 12	13	44	58 89
14			58 87
15			58 71
22			58 86
June 18			58 41

{ Piazzi XIII—238 } { B A C 4647. }

1830	h	m	s
May 5	13	46	3 82

{ Piazzi XIII—270 } { B A C 4666 }

1830	h	m	s
April 8	13	51	7 80
May 5			7 91

Centauri β

1829.	h	m	s
April 13	13	51	54 43
14			54 70
20			54 22
21			54 07
23			54 45
24			54 29
28			54 04
29			54 44
30			54 25
May 1			54 32
2			54 14
11			54 50
12			54 55
14			54 45
15			54 25

{ Piazzi XIII—287. } { B A C 4680. }

1830	h	m	s
May 6	13	55	21 81

5 Centauri θ

1829	h m s
April 13	13 56 42 50
14	42 52
20	42 43
21	42 42
24	42 38
29	42 65
30	42 51
May 1	42 54
2	42 41
11	42 71
12	42 71
June 18	42 33
July 6	42 41
7	42 32
8	42 58
9	42 38
13	42 41
14	42 34
15	42 38
16	42 29

100 Virginis λ

1829	h m s
April 24	14 9 55 56
29	55 76
30	55 47
May 1	55 50
11	55 64
12	55 61
14	55 76
25	55 42
June 18	55 51
July 6	55 42
7	55 37
8	55 36
9	55 35
13	55 51

{ Piazzi XIV—104 / B A.C. 4807. }

1829.	h m s
April 29	14 23 23 34

Centauri η.

1829	h m s
April 14	14 24 44·87
20	44 94
21	44 89
23	44 74
24	44 91
30	44 93
May 1	44 86
11	45 35
12	45 17
14	45 20
25	44 93
June 15	44 64
18	44 63

Centauri α²

1829	h m s
April 14	14 28 7 74
21	7 48
23	7 62
24	7 56
30	7 49
May 11	7 72
12	7 98
14	7 72
25	7 37
June 15	6 70
18	6 77

Lupi α.

1829	h m s
April 29	14 30 39 88
May 1	40 13
12	40 22
14	40 23
25	40·02
June 15	39 39
18	39·73

9 Libræ α

1829	h m s
April 13	14 41 29·37
14	29 10

9 Libræ α, continued

1829	h m s
April 20	14 41 29 20
21	29 17
24	29 32
29	29 17
30	29 27
May 1	29 36
11	29 45
12	29 60
14	29 41
25	29 28
June 15	29 09
17	29 28
18	29 29
July 7	29 28
8	29 22
9	29 25
11	29 38
13	29 37

20 Libiæ

1829	h m s
May 1	14 54 8·40
11	8 48
12	8 58
14	8 51
25	8 39
June 15	8 09
17	8·16
18	8 17
July 6	8·25
7	8 10
8	8 19
9	8 24
11	8 22
13	8 30

Trianguli Australis γ

1829.	h m s
April 13	15 3 10 61
14	10 27
20	9 90
21	9 85
24	10 17
29	9·47
30	10 29

Trianguli Aust γ, cont

1829	h m s
May 1	15 3 10 21
11	10 46
12	10 22
14	10 19
June 15	9·22
18	9 23

27 Libræ β

1829	h m s
April 21	15 7 52 23
24	52 13
29	52·19
May 1	52·37
11	52 42
12	52 47
14	52 37
June 15	52 32
17	52 26
18	52 13
July 7	52 03
8	52 13
9	52 06
11	51 92
13	52 12
14	52 10
15	52·12
16	51 98

Lupi γ

1829	h m s
April 13	15 23 50 62
14	50 56
24	50 44
29	50·54
30	50 44
May 1	50 62
11	50 69
12	50 91
14	50 77
June 18	50·10
July 9	50 40

Trianguli Australis β

1829	h	m	s
April 13	15	40	14.86
14			14.63
24			14.62
29			14.34
30			14.68
May 1			14.69
11			14.83
12			14.84
14			14.61
June 18			13.69

46 Libræ θ

1830	h	m	s
July 2	15	44	9.33
3			9.55

7 Scorpii δ

1829	h	m	s
April 13	15	50	17.40
14			17.87
24			17.46
29			17.61
30			17.58
May 1			17.82
11			17.84
12			17.99
14			17.75
June 18			17.58
July 6			17.56
7			17.76
8			17.63
15			17.62
16			17.60
21			17.71
23			17.60
24			17.63
25			17.78
27			17.65

49 Libræ

1829	h	m	s
Aug 8	15	50	47.94
9			47.82

49 Libræ, *continued*

1830	h	m	s
July 2	15	50	47.77

8 Scorpii β

1829	h	m	s
April 14	15	55	33.94
24			33.76
30			33.81
May 1			34.03
11			34.02
12			34.14
14			33.85
June 18			33.80
July 6	-		33.76
7			33.96
9			33.82
11			33.72
13			33.88
15			33.76
16			33.73
21			33.77
22			33.93
23			33.83
24			33.76
25			33.86
27			33.75
Aug 7			33.81
8			33.92
13			33.94

{Piazzi XV—252 / B A C. 5330}

1829	h	m	s
Aug 13	15	55	34.86

14 Scorpii γ

1829	h	m	s
Aug. 9	16	2	7.53

1 Ophiuchi δ

1829	h	m	s
April 13	16	5	26.80

1 Ophiuchi δ, *continued*

1829	h	m	s
April 14	16	5	26.73
24			26.41
29			26.64
30			26.49
May 1			26.85
11			26.86
12			26.94
14			26.62
June 15			26.71
18			26.74
July 6			26.62
7			26.67
8			26.54
9			26.57
11			26.60
13			26.56
14			26.58
15			26.72
16			26.54
21			26.52
22			26.78
23			26.55
24			26.78
25			26.59
27			26.62
Aug 7			26.66
8			26.67
13			26.67

2 Ophiuchi ε

1829	h	m	s
April 24	16	9	19.71
29			20.08
30			19.85
May 1			20.25
11			20.18
12			20.16
14			20.02
June 18			20.11
July 6			19.94
7			20.09
8			19.94
9			19.99
14			20.02
15			20.07
16			19.92

2 Ophiuchi ε, *continued*

1829	h	m	s
July 21	16	9	20.08
22			20.16
23			19.96
24			20.00
25			20.08
27			20.02
Aug 7			20.12
8			19.99
13			20.06

4 Ophiuchi ψ.

1829	h	m	s
July 23	16	14	9.98
24			10.03
25			10.00
27			9.94
Aug 7			10.03
8			10.02

7 Ophiuchi χ

1830	h	m	s
July 3	16	17	10.83

21 Scorpii α

1829	h	m	s
April 14	16	18	59.92
20			59.70
24			59.61
29			59.79
30			59.63
May 1			59.82
11			59.91
12			59.90
14			59.64
June 15			59.68
18			59.71
July 7			59.94
8			59.69
9			59.79
14			59.70
15			59.80
16			59.86
21			59.61

21 Scorpii α, *continued*		23 Scorpii τ, *continued*		26 Scorpii s, *continued*		35 Ophiuchi η, *continued*	
1829	h m s	1829	h m s	1829	h m s	1829	h m s
July 22	16 18 59 79	Aug 7	16 25 18 79	Aug 7	16 39 10 19	June 18	17 0 37 98
23	59 73	·8	18 66	8	10 08	July 6	38 03
24	59 86	13	18 85	17	10 16	8	38 03
25	59 87	17	18 80	27	9 86	9	38 08
27	59 70	27	18 68			Aug. 7	38 21

Trianguli Australis α

{ Piazzi XVI — 236 } { B A C 5700 }

Aug 7	59 84			1830		8	38 01
13	59 87	1829		July 31	16 47 5 11	9	37 93
27	59 84	April 14	16 30 45 03			13	38 11
Sept 14	59 78	20	44 98			14	38 24
15	59 58	24	44 90			20	38 19
17	59 64	29	44 61			25	38 00
22	59 73	30	44 49			27	38 13

{ Piazzi XVI — 251 } { B A C 5712 }

24	59 85	May 1	44 60	1829			
26	59 73	11	44 56	Aug 9	·16 49 50 99		
27	59 83	12	44 78	1830			
28	59 77	14	44 82	July 3	50 94		

{ Piazzi XVII — 43 } { B A. C 5839 }

Oct 1	59 85	June 18	43 23	30	50 96	1829	
2	59 82	Aug 7	44·45			Aug 9	17 10 0 09

Octantis σ

Aræ γ

1830		8	44 50	1829		1829	
Sept. 15	59 76	17	44 99	April 14	16 54 69 59	June 18	17 11 5 73
16	59 86	27	44 69	20	64 99	Aug. 7	6 27
19	59 73			24	72 16	8	6 37
21	59 89			29	68 44	13	6 31
22	59 72			30	68 12	20	6 50
29	59 93					24	6 82

{ Piazzi XVI — 143 } { B A. C 5579 }

Oct 1	59 90	1830.		May 1	67 12	25	6 45
		July 3	16 31 45·08	11	71 61	26	6 69
				14	58 83	27	6 36

26 Scorpii s.

Aræ α

8 Ophiuchi φ

		1829		June 18	27·55	1829	
1829		April 14	16 39 10 08	July 8	68 63	April 20	17 18 42 92
June 15	16 21 24 95	24	9 79			24	42 76
		29	9 94			29	42 91
Aug 8	25 05	30	9 76			30	42 65

35 Ophiuchi η

9	24 98	May 1	9 96			May 1	42 83
1830		11	9 87	1829		11	42 98
July 2	25 06	12	9·99	April 20	17 0 38 13	12	42 83
		14	9 92	24	38 18		

23 Scorpii τ

		June 18	9 69	29	38 08	June 18	42 39
1829				30	37 93		
July 22	16 25 18 82	July 6	9 99			Aug 7	42 96
23	18 65	8	9 89	May 1	38 08	8	42 87
24	18 74	9	9 82	11	38 06		
25	18 70			12	38 16		
27	18 78			14	38 08		

Aræ α, continued

1829	h m s
Aug 13	17 18 42 83
14	42 99
15	42 94
20	42 94
24	43 13
25	42 89
26	43 17
27	42 68

35 Scorpii λ

1829	h m s
April 24	17 22 4 40
29	4 35
30	3 99
May 1	4 36
12	4 45
June 18	4 02
Aug 7	4 47
8	4 46
15	4 58
20	4 44
25	4 41
26	4 65
27	4 32

Scorpii θ

1829	h m s
April 24	17 25 6 08
29	6 62
30	6 75
May 1	6 81
11	6 85
12	6 89
Aug 7	6 85
8	6 81
13	6 81
14	6 70
15	6 87
20	6 82
26	6 78
27	6 65
28	6 96

55 Serpentis ξ

1829	h m s
Sept 7	17 27 51 56

Scorpii κ

1829	h m s
April 20	17 30 43 75
29	44 05
30	43 87
May 1	44 03
11	44 02
12	44 03
June 18	43 84
Aug 7	44 15
8	44 07
13	43 97
14	44 02
15	43 84
20	44 25
25	44 10
26	44 46
27	43 85

Scorpii ι¹

1829	h m s
April 20	17 35 41 96
24	41 87
29	42 02
30	41 92
May 1	42 04
11	42 08
12	42 18
June 18	41 71
Aug 7	41 94
8	42 18
13	41 82
14	42 21
15	42 02
25	42 22
26	42 32

64 Ophiuchi ν

1829	h m s
Aug 28	17 49 40 36
Sept 4	40 38
12	40 26

Aræ θ

1829	h m s
Sept 3	17 53 24 06
12	24 10

13 Sagittarii μ

1829	h m s
May 11	18 3 35 85
12	35 85
June 18	35 80
Aug 13	35 90
14	36 00
15	35 64
17	35 90
19	36 03
26	36 09
27	35 94
28	36 12
Sept. 3	35 78
4	35 86
7	36 06

{ Piazzi XVIII — 25. } { B A C 6195 }

1829	h m s
Aug 11	18 7 30 28

20 Sagittarii ε

1829	h m s
April 20	18 12 53 19
24	53 21
29	53 31
30	53 08
May 1	53 24
11	53 20
12	53 40
June 18	53 04
Aug. 13	53 13
14	53 34
15	53 26
17	53 29
19	53 32
25	53 30
26	53 49

20 Sagittarii ε continued

1829	h m s
Aug 27	18 12 53 18
28	53 40
Sept 3	53 28
4	53 28
12	53 42

21 Sagittarii

1830	h m s
Aug 1	18 15 13 56

B A C 6267

1829	h m s
Sept 7	18 18 1 48

Telescopii δ¹

1829	h m s
Aug 24	18 19 9 65
26	9 74
Sept 3	9 53
12	9 66

Telescopii δ²

1829	h m s
Aug 24	18 19 27 51
26	27 65
Sept 3	27 28
4	27 38
12	27 51

Pavonis ζ

1829	h m s
Aug 24	18 23 8 39
25	8 35
26	7 95
Sept 4	8 33
14	8 08

Piazzi XVIII — 128 / B A C 6340

1829	h m s
Sept 7	18 27 59 26

2 Aquilæ

1829	h m s
Sept. 4	18 32 58 04
12	58 01
14	57 99

27 Sagittarii φ

1829	h m s
Aug 24	18 35 2 07
25	1 91
26	2 10
28	2 19
Sept 3	2 08
14	2 06

29 Sagittarii

1829.	h m s
Sept. 7	18 39 34 91
1830	
July 5	35 55
Aug 1	34 62
2	34 60*

34 Sagittarii σ

1829	h m s
April 20	18 44 43 19
24	43 30
29	43 34
30	43 08
May 1	43 15
11	43 17
12	43 20
July 21	43 10
22	43 22
23	42 99
24	43 22
27	43 30

34 Sagittarii σ, *continued*

1829	h m s
Aug 8	18 44 43 26
13	43 34
15	43 40
17	43 18
24	43 30
25	43 26
26	43 45
27	43 20
28	43 33
Sept. 3	43 27
4	43 28
7	43·32
10	43 18
12	43 21
14	43 11

38 Sagittarii ζ

1829	h m s
July 21	18 51 47 07
22	47 56
23	47·30
24	47·37
27	47 35
Aug. 7	47·33
8	47 29
13	47·41
14	47 49
15	47 60
17	47 53
24	47 48
25	47 44
26	47 68
27	47 35
28	47 44
Sept. 3	47·41
7	47·61
10	47 39
12	47·50

40 Sagittarii τ.

1829	h m s
Sept 14	18 56 19·36
16	19 30

16 Aquilæ λ

1829	h m s
April 20	18 57 13 81
29	13 53
30	13 39
May 1	13 52
11	13 59
12	13 64
July 21	13 39
22	13 57
23	13 51
24	13·52
27	13 64
Aug 7	13 58
8	13 62
13	13 46
14	13 68
15	13 52
17	13 60
24	13 57
25	13 62
26	13 79
Sept 2	13 55
3	13 67
4	13 58
7	13 73

41 Sagittarii π.

1829	h m s
Sept 16	18 59 39 01

20 Aquilæ.

1829	h m s
Aug. 26	19 3 27·49
28	27 52
Sept 2	27·25
4	27 48
16	27 36

Sagittarii β¹ (1st Star)

1829	h m s
Aug. 7	19 10 23·98

Sagittarii β¹ (1st Star), *continued*

1829	h m s
Aug 8	19 10 23 96
13	24 06
14	24 18
15	24 28
17	24 08
19	24 01
26	24 26
27	23 84
28	24 18
Sept 2	23 85
3	23 84
4	24 13
7	24 10
10	23 83
12	24 12
16	23 84

44 Sagittarii ϱ¹

1829	h m s
Oct 6	19 11 48 56

45 Sagittarii ϱ².

1830	h m s
Aug. 2	19 11 55 60

Sagittarii α

1829	h m s
Sept. 12	19 12 5 77
16	5 79

30 Aquilæ δ

1829	h m s
Oct. 1	19 16 55 67
2	55 57
3	55 57

B A C 6658.

1830	h m s
July 6	19 18 11 57

B. A. C 7020

1829		h m s
April 20		19 26 12 78
24		15 78
29		5 30
30		3 32
May 1		3 67
11		17 31
12		14 54
Aug 7		17 66
1831		
Jan 27	SP	22 69
31	SP	19 83

{ Piazzi XIX—176. }
{ B A C —6707 }

1830	
July 6	19 26 31 16

39 Aquilæ x

1829	
Aug 8	19 27 44 57
9	44 73
13	44 59
14	44 46
15	44 80
17	44 56
19	44 40
28	44 72
Sept 2	44 61
3	44 58
4	44 62
7	44 66
10	44 67
12	44 56

54 Sagittarii e¹

1829	
Aug. 27	19 30 58 76

55 Sagittarii e².

1829	
Aug. 7	19 32 47 38

55 Sagittarii e², continued

1829	h m s
Aug 8	19 32 47 38
9	47 42
13	47 22
14	47 44
15	47 41
17	47 45
19	47 43
28	47 51
Sept 3	47 37
7	47 55
10	47 40
12	47 46

50 Aquilæ γ

1829	
Oct 1	19 38 10 70
2	10 81
3	10 68
6	10 50
10	10 54
1830	
Aug. 12	10 61
13	10 75
14	10 68

57 Sagittarii

1830	
Aug 2	19 42 18 64

53 Aquilæ α.

1829	
April 20	19 42 29 21
24	29 21
29	29 16
30	29 12
May 1	29 05
11	29 01
12	29 04
Aug. 7	29 20
8	29 31
9	29 31
15	29 34
19	29 27
24	29 19

53 Aquilæ α, continued

1829	h m s
Aug 25	19 42 29 33
27	29 11
Sept 2	29 39
4	29 35
7	29 34
10	29 27
12	29 32
14	29 31
15	29 45
16	29 29
17	29 13
20	29 26
22	29 31
24	29 37
25	29 36
26	29 40
27	29 35
28	29 37
Oct. 1	29 17
2	29 08
3	29 39
6	29 32
10	29 29
19	29 34
20	29 29
23	29 25
26	29 35
27	29 43
30	29 31
Nov 3	29 36
14	29 18
19	29 36
20	29 39
24	29 28
26	29 48
Dec. 11	29 21
24	29 19
1830	
Aug 11	29 31
12	29 38
13	29 33
14	29 35
Sept 15	29 30
19	29 31
21	29 38
22	29 35
29	29 33
Oct. 1	29 32

53 Aquilæ α, continued

1830	h m s
Oct 3	19 42 29 20
8	29 31
9	29 45
10	29 33
11	29 37
12	29 47
16	29 47
17	29 27
18	29 36
19	29 37
23	29 34
24	29 26
1831	
Mar 15	29 38
16	29 20
20	29 30
21	29 34
22	29 34
27	29 29
28	29 26
29	29 26

59 Sagittarii b

1829	
Sept 14	19 46 30 25
16	30 16
17	30 21

60 Aquilæ β

1829	
Sept 28	19 46 57 83
Oct 1	57 89
2	57 90
3	57 69
6	57 82
10	57 77
1830	
Aug. 12	57 85
13	57 85
14	57 69

62 Sagittarii c.

1829	
Aug. 9	19 52 11 48
14	11 69

62 Sagittarii c, continued.

1829	h m s
Aug 15	19 52 11 78
17	11 70
20	11 60
24	11 69
25	11 60
26	11 89
27	11 80
Sept. 2	11 60
10	11 73
12	11 66
14	11 79
16	11 69
17	11 67
22	11 58
25	11 64

63 Sagittarii

1829	h m s
Aug 13	19 52 26 87

65 Aquilæ θ

1829.	h m s
Aug. 9	20 2 31 91
14	31 94
15	32 07
17	31 87
19	31 72
20	31 83
24	31 89
25	31 94
26	32 03
27	31 73
Sept. 2	31 91
10	31 94
12	31 94
14	31 89
16	31 88
22	31 91
25	31 84

6 Capricorni α².

1829	h m s
April 29	20 8 36 98
30	36 89

6 Capricorni α², cont

1829	h m s
May 1	20 8 36 90
12	36 79
Aug 9	37 13
13	36 92
15	37 13
20	36 99
24	37 01
25	37 04
27	37 16
Sept 2	36 98
10	37 07
12	36 95
28	37 01
Oct. 1	36 94
2	36 97
3	36 94
6	37 12
10	37 09
1830.	
Mar. 18	36 95

7 Capricorni σ.

1830	h m s
Oct 24	20 9 34 72

9 Capricorni β

1829	h m s
Aug. 9	20 11 27 22
Sept. 7	27 37
10	27 20
14	27 09
17	27 26
22	27 02
24	27 17
25	27 07
Oct 6	26 88
1830	
Mar 18	27 18
Aug 31	27 23

Pavonis α

1829	h m s
April 29	20 12 8 11
30	8 39
Aug 14	8 92
19	8 99
25	8 83
27	8 70
28	8 80
Sept 3	8 56
12	8 65
16	8 62

10 Capricorni π

1829	h m s
Sept. 2	20 17 34 89
3	35 02
14	35 00
17	35 01
24	34 88
25	35 00
28	35 04
Oct 1	35 00
1830	
Aug 31	34 89

11 Capricorni ς

1830	h m s
Oct 24	20 19 9 23

69 Aquilæ

1829	h m s
Aug 24	20 20 45 73
Sept 3	45 72
14	45 74
17	45 78
24	45 58
25	45 71
26	45 65
28	45 64
Oct. 1	45 70

{ Piazzi XX—172 / B A C. 7078 }

1830	h m s
Aug 3	20 22 53 50

{ Piazzi XX—187 / B A C. 7087. }

1829	h m s
Aug 13	20 24 43 40

Indi α

1829	h m s
April 20	20 25 34 57
29	34 42
30	34 28
May 1	34 39
Aug 14	34 78
15	34 95
17	34 85
19	34 83
24	34 79
25	34 73
26	34 84
27	34 60
28	34 67
Sept 2	34 30
3	34 56
7	34 57
12	34 55
14	34 58
17	34 47
22	34 40
24	34 40
28	34 55

{ Piazzi XX—194 / B A C. 7097. }

1830	h m s
July 7	20 25 54 72
Aug 3	54 54

13 Capricorni τ¹.

1830	h m s
Aug 31	20 27 48·89

Pavonis β.

1829	h m s
April 29	20 29 31 36
May 1	31 57
Aug 15	32 14
24	32 04
25	32 14
26	32 32
27	31 90
28	32 25
Sept. 2	31 86
3	32 02
7	32 15
12	32 02
14	31 97
17	31 90
24	31 82
25	31 84
26	31 66

{ Piazzi XX—240 / B.A C. 7145 }

1830.	h m s
July 7	20 30 59 00
Aug 3	58 81

16 Capricorni ψ

1829.	h m s
Sept 14	20 36 1 01
17	1 19
25	0 93
26	0 91

2 Aquarii ι.

1829	h m s
Nov 3	20 38 28 05

Microscopii α

1829	h m s
Sept. 24	20 39 19 69

{ Piazzi XX—310 / B A C 7209 }

1830	h m s
Aug 3	20 39 41 42
30	41 37

Indi β

1829	h m s
Aug. 15	20 41 27 78
17	27 48
19	27 56
24	27 81
25	27 63
26	27 47
27	27·54
28	27 50
Sept. 3	27 54
7	27 69
12	27 53
14	27 42
17	27 48
25	27 38
28	27 10

7 Aquarii

1829	h m s
Aug 14	20 47 42·26

21 Capricorni

1830	h m s
Oct 9	20 51 17 20
10	17 24
11	17 24
16	17 20
17	17 27
18	17 27
19	17 24
21	17 15
23	17 13

9 Aquarii.

1829	h m s
Aug. 13	20 51 45 71

22 Capricorni η

1829	h m s
Aug 15	20 54 43 48
17	43 12
19	43 15
25	43 10
26	43 30
27	43 12
28	43 21
Sept 2	43·10
3	43 18
7	43 31
12	43 18
14	43 12
17	43 24
22	43 11
25	43 13
26	43 03
28	42 95
Oct. 1	42·95
2	42 92
3	43 18
6	43 16
10	43·16

13 Aquarii ν.

1829.	h m s
Aug. 14	21 0 19 58
15	19 69
17	19 57
19	19 45
25	19 60
27	19 66
28	19 62
Sept. 2	19·63
3	19 54
12	19 75
14	19 50
17	19 51
21	19 53
22	19 62
25	19 61
26	19 55
28	19 65
Oct. 1	19·62
2	19·57
3	19 49
6	19 72
10	19 67

29 Capricorni

1829	h m s
Sept 3	21 6 19 84
12	19 90
17	19 93
22	19 66
26	19 69
28	19 72
Oct. 1	19 76
2	19 76
3	19 58
6	19 81
10	19 73
1830	
Aug 31	19 84

30 Capricorni.

1830.	h m s
Oct 5	21 8 24 68
8	24 51
9	24 70
10	24 85
11	24 72
16	24 73
17	24 75
18	24 66
19	24·46
21	24 56
23	24 70

B A.C. 7406.

1829.	h m s
Aug 17	21 12 10 65

Pavonis γ

1829	h m s
Aug 15	21 12 16 70
25	16 58
27	16 49
28	15·92
Sept 2	16·07
7	16 71
12	16 29
22	16 29
24	16·14

18 Aquarii

1829	h m s
Sept 10	21 14 53 66

19 Aquarii.

1829	
Aug 14	21 16 4 24

34 Capricorni ζ.

1829	
Aug 15	21 16 57·15
25	56·88
27	56 97
28	57·00
Sept. 2	57 00
7	56 99
14	56 82
22	56 82
24	56 86
28	56 87
Oct. 1	56 78
2	56 82
3	56 76
6	56 84
10	56 85

22 Aquarii β

1829	
Aug 26	21 22 36 34
27	36 32
28	36 45
Sept 2	36 27
7	36 35
12	36 39
22	36·30
23	36 18
24	36 16
25	36 22
26	36 24
28	36 25
Oct 2	36 27
3	36·15
6	36·35
9	36 38

23 Aquarii ξ

1829	h m s
Aug 14	21 28 41 67

40 Capricorni γ

1829	
Aug 15	21 30 39 90
17	39 79
27	39 71
28	39 77
Sept 2	39 65
7	39 98
12	39 80
14	39 46
21	39 57
22	39 57
24	39 57

42 Capricorni

1829	
Sept 10	21 32 17 68

46 Capricorni c¹.

1829.	
Sept 10	21 35 55 97

47 Capricorni c².

1829.	
Nov 5	21 37 11 81
1830 Aug 5	11 67

48 Capricorni λ.

1829	
Nov 4	21 37 22 67

49 Capricorni δ

1829	
Aug 15	21 37 39 08
17	39 01
26	38 82

49 Capricorni δ, cont

1829	h m s
Sept 2	21 37 38 79
7	38 90
12	38 98
17	38 96
22	38 83
24	38 81

Gruis γ.

1829	
Aug 15	21 43 36 73
27	36 65
28	36 48
Sept 2	36 47
7	36 41
12	36 56
24	36 39
Oct 19	36 42

31 Aquarii o

1829	
Sept 24	21 54 30 94
Oct 19	30 92

34 Aquarii α

1829	
Aug 27	21 57 2 98
Sept 2	2 95
10	2 93
12	3 01
22	3 02
24	3 00
1830. Nov. 6	3 03
7	3 14
9	3 08
12	2 96

33 Aquarii ι

1829	
Nov. 4	21 57 14 93

Gruis α

1829	h m s
Sept 7	21 57 28 59
14	28 34

36 Aquarii

1829	
Nov 5	22 0 27 41
1830 Aug 5	27 18

37 Aquarii e¹

1829	
Aug 14	22 1 27 03

38 Aquarii e²

1830	
Sept 1	22 1 31 88

{ Piazzi XXII—2 } { B A C 7726 }

1829	
Sept 12	22 1 41 60

Toucanæ α

1829.	
Aug 26	22 6 46 57
27	46 72
28	46 53
Sept 14	46 52
Oct 19	46 44
21	46 21

42 Aquarii

1830	
Sept 1	22 7 41 44
2	41 56
Oct 26	41 20

43 Aquarii θ

1829	h m s
Aug 14	22 7 51 16
15	51 63

{ Piazzi XXII — 46 / B A C 7774 }

1830	
Aug. 5	22 7 53 70

48 Aquarii γ

1829	
Aug 26	22 12 52 36
27	52 35
28	52 35
Sept 7	52 40
10	52 21
14	52 15
Oct 19	52 34

{ Piazzi XXII — 81 / B. A C 7804 }

1829	
Aug 15	22 14 37 07

51 Aquarii.

1829	
Sept 12	22 15 15 19

55 Aquarii ζ

1829	
Aug 27	22 20 4 58
28	4 51
Sept. 7	4 53
10	4 47
14	4 41
Oct 17	4 61
19	4 59
20	4 59
21	4 48
30	4 80

62 Aquarii η

1829	h m s
Oct 17	22 26 37 11
19	37 18
20	37 15
21	37 08
22	37 28
23	37 22
26	37 18
30	37 21

63 Aquarii κ

1829	
Sept 12	22 28 56 93

Gruis β

1829	
Aug 17	22 32 28 48
26	28 51
27	28 84
28	28 56
Sept 3	28 88
7	28 52
10	28 47
14	28 30
Oct 20	28 55
21	28 43
23	28 65
24	28 67
28	28 50
30	28 64

67 Aquarii

1829	
Sept 12	22 34 21 21
1830 Sept 2	21 46

Gruis ε

1829	
Aug 27	22 38 14 54
Sept 3	14 52
7	14 18
14	13 95

Gruis ε, *continued*

1829	h m s
Oct 19	22 38 14 27
20	14 27
21	14 06
23	14 32
24	14 24
28	14 16
30	14 54

Lalande 44564.

1830.	
Oct 27	22 38 30 19

73 Aquarii λ

1829.	
Aug. 15	22 43 44 62
16	44 53
17	44 23
Sept 7	44 41
10	44 28
14	44 19
Oct 19	44 41
20	44 55
21	44 47
23	44 47
26	44 43
30	44 66
Nov 5	44·53
6	44 27

76 Aquarii δ

1829	
Aug. 14	22 45 37 20
26	37 34
27	37 25
28	37 09
Sept 3	37 23
Oct. 26	37 16
Nov 2	37 29

{ Piazzi XXII — 250 / B A C 7986 }

1829	h m s
Oct 10	22 46 22 02

24 Piscis Australis α.

1829	
Aug 14	22 48 14 36
17	14 10
26	14 28
28	14 25
Sept 3	14 43
7	14 17
10	14 07
14	14 12
Oct 17	14·17
19	14 06
20	14 21
21	14 15
22	14 40
23	14 23
24	14 46
26	14 31
28	14 31
30	14 37
Nov. 2	14 34
16	14 27

3 Piscium

1829.	
Aug 16	22 51 54 79

81 Aquarii

1830	
Oct 27	22 52 33 44

B. A C. 8019

1829	
Sept 12	22 53 4 57

83 Aquarii h¹

1829	
Nov 6	22 56 17 49

84 Aquarii *h²*.		90 Aquarii φ, *continued*		98 Aquarii *b¹, continued*		12 Piscium.	
1829 Nov. 6	h m s 22 56 27 49	1830. Nov 6	h m s 23 5 31 11	1829. Oct 20	h m s 23 14 1 78	1829 Sept 13	h m s 23 20 47 21
		7	30 90	21	1 78		

Gruis ι (col 1); **Toucanæ γ** (col 2); etc.

84 Aquarii *h²* / Gruis ι		90 Aquarii φ / Toucanæ γ		98 Aquarii *b¹*		13 Piscium / Sculptoris β	
		9	30 92	23	1 90		
		12	30 99	24	1 93		

Gruis ι

1829 Aug 26	23 0 41 79			26	1 92	1829 Oct 10	23 23 14 37
27	42 44			27	1 93		
28	42 02	**Toucanæ γ**		28	1 86	**Sculptoris β**	
		1829 Aug 26	23 7 26 95	30	2 08		
Sept. 3	42 39	27	27 16			1829 Aug 26	23 23 49 80
10	42 16	28	27 00	Nov 2	2 03	27	50 11
14	41 96			3	2 02	28	49 91
		Sept 3	27 29	4	2 02		
Oct 20	42 00	7	26 96	5	1 99	Sept 3	50 18
21	41 90	10	26 94			14	49 58
23	42 12	14	26 61	{Piazzi XXIII — 68 } { B A C — 8152 }			
26	42 25					Oct 20	49 75
27	42 18	Oct 20	26 82	1829 Sept 13	23 14 48 58	21	49 77
28	42 07	21	26 73			22	50 03
30	42 35	23	27 02			23	49 87
		24	26 96			24	49 90
Nov. 16	42 01	26	27 03	**99 Aquarii *b²***		26	50 04
		27	27 04			27	50 04
		30	27 10	1829 Oct 26	23 17 6 37	30	50 15
89 Aquarii *c³*.				27	6 53		
		93 Aquarii ψ²		28	6 35	Nov 3	50 05
1829 Nov 2	23 0 49 47			30	6 47	4	49 98
3	49 50	1829 Nov. 2	23 9 3 92	Nov 2	6 58		
		3	3 91	4	6 42	**14 Piscium**	
90 Aquarii φ				5	6 34		
		96 Aquarii				1829 Oct 10	23 25 24·69
1829 Aug 16	23 5 31 07			**8 Piscium *κ***		Nov 7	24 58
		1829 Sept 12	23 10 34·90				
Oct 10	31 18			1829 Nov 7	23 18 13 15	1830 Oct 28	24 55
		B A C 8129					
Nov 2	30 98					{Piazzi XXIII — 126} { B A C 8214 }	
3	31 06	1830 Oct 27	23 11 55 04	{Piazzi XXIII — 96 } { B A C 8184 }			
4	30 91					1829 Sept 12	23 26 45 66
1830 Oct 8	30 93	**98 Aquarii *b¹***		1829 Sept 12	23 20 44 64		
10	30 98					**103 Aquarii *A¹***	
11	30 96	1829 Sept 3	23 14 2·03	1830 Oct 28	44 76		
12	30 98	7	2 07			1829 Aug 26	23 32 44 95
16	30 91	10	2 08			28	44 85
17	31 05	14	1 63				
18	31 04						
19	30 98						
23	31 10						

103 Aquarii A¹, *cont.*

1829.	h	m	s
Sept 3	23	32	45 06
7			45 01
10			45 01
14			44 74
Oct 19			44 98
21			44 96
22			45 20
23			45 05
24			45 15
26			45 09
27			45 17
30			45·24
Nov 2			45 06
3			45 14
4			45 07
5			44 96
16			45 12

106 Aquarii ι¹

1829	h	m	s
Oct 27	23	35	22 74
30			22 67
Nov 2			22 62
3			22 65
4			22 54
5			22 64
16			22 63

20 Piscium

1829	h	m	s
Sept 12	23	39	12 00
13			12 05
Oct 10			12·24

20 Piscium, *continued*

1830	h	m	s
Sept 3	23	39	12 37

Sculptoris δ

1829			
Aug 26	23	40	3 43
27			3 61
28			3 52
Sept 3			3 63
7			3 41
10			3 43
14			3 18
Oct 19			3 22
20			3·25
21			3 27
22			3 42
23			3 49
26			3 21
27			3 35
Nov 4			3 40

Octantis γ²

1829			
Nov 16	23	47	55 76

27 Piscium

1829			
Nov 2	23	49	58 21
3			58 29

27 Piscium, *continued*

1829	h	m	s
Nov. 4	23	49	58 19
5			58 17
1830			
Oct 28			58·01

Toucanæ ε

1829			
Aug 26	23	51	0 98
27			1 15
28			1 13
Sept 3			1 30
7			1 07
14			0 68
Oct 20			1 00
22			1 02
23			0 80
27			1·11
30			1 27

29 Piscium

1829			
Nov 2	23	53	6 71
3			6·90
4			6 81

2 Ceti

1829			
Sept 14	23	55	1 00
17			1 39
Oct 19			1·31
22			1 60

2 Ceti, *continued*

1829	h	m	s
Oct. 23	23	55	1 48
26			1 52
Nov. 16			1 53

{ Piazzi XXIII—270 / B A.C. 8365. }

1829			
Oct 10	23	56	20 95

33 Piscium.

1829.			
Nov. 4	23	56	38 03
1830			
Oct 8			38 15
9			38 12
10			38 08
11			38 08
12			37·99
16			38 00
17			38 11
18			38 01
19			38 05
23			37 99
Nov. 6			37 98
7			38·09
9			38·15
12			38 18

4 Ceti.

1829			
Oct. 10	23	59	1·77
1830			
Sept. 3			1 93

Observed Differences of Right Ascension of neighbouring Stars.

Difference of R. A. between 20 Geminorum and B. A C. 2116

1830. Jan 7   By mean of observations at 1st and 7th wires,

           20 Geminorum precedes B. A C 2116 by   . . .   0 95

Dec. 29   By similar observations,

           20 Geminorum precedes B A C 2116 by .. ..   0 85 nearly

Difference of R A between Piazzi VI—258 and $\varkappa$ Canis Majoris.

1830 Feb 23.   By an observation at the 2d wire,

           Piazzi VI—258 precedes $\varkappa$ Canis Majoris by... .. 18 7

Feb 25   By a similar obseivation,

           Piazzi VI—258 piecedes $\varkappa$ Canis Majoris by 18 5

Differences of R A between B. A. C 2575, Lacaille 2956, and c Puppis.

1830. Feb. 25.   By an observation at the 2d wire,

           B A. C 2575 precedes c Puppis by 40 7

           and Lacaille 2956 precedes c Puppis by.. . ... 10 7

Difference of R.A between 8 Libræ and α Libræ

1829 May 25   By an observation at the 2d wire,

           8 Libræ precedes α Libræ by ... . 11·2

Difference of R. A. between β^{1} Sagittarii (1st Star) and β^{1} Sagittarii (2d Star)

1829. Aug. 13.   By mean of observations at the 1st and 7th wires,

           β^{1} Sagittarii (1st Star) precedes β^{1} Sagittarii (2d

           Star) by 3 2

Aug. 27.   (No wire specified),

           β^{1} Sagittarii (1st Star) precedes β^{1} Sagittarii (2d

           Star) by 2 95

Difference of R.A. between α^{1} and α^{2} Capricorni.

1829.	April 29	By an observation at the 2d wire, α^{1} precedes by	23 7
	Aug. 13.	,, 1st wire, ,, by	23 9
	17.	,, 2d wire, ,, by	23·8
	25.	,, 2d wire, ,, by	23·9
	26.	,, 2d wire, ,, by	23 4
	Sept. 10.	,, 2d wire, ,, by	23·8

Observed Differences of Right Ascension of neighbouring Stars (continued)

Difference of R.A between B A C 6992 and β Capricorni

1829.	Sept. 17.	By an observation at the 2d wire, B A C 6992 precedes by 14 1
	22.	,, 2d wire, ,, by 14 05
	24.	,, 2d wire, ,, by 14 0
	25	,, 2d wire, ,, by 14 15

Difference of R A between A^1 and A^2 Aquarii

1829.	Oct	22.	By an observation at the 6th wire, A^2 Aquarii follows by.. 10 4
		24.	,, 6th wire, ,, by 10 7
		27.	,, 6th wire, ,, by 10 5
		30	,, 6th wire, , by. 10 6
	Nov	2	,, 6th wire, ,, by. 10 6
		3.	,, 6th wire, ,, by.. 10 7
		5.	,, 6th wire, ,, by 10 9

ROYAL OBSERVATORY, CAPE OF GOOD HOPE.

MEAN NORTH POLAR DISTANCES OF STARS
For 1830, January 1,

DEDUCED FROM EACH DAY'S OBSERVATION,

IN THE YEARS

1830 AND 1831.

Hydri β		20 Ceti		55 Ceti ζ, *continued*		16 Eridani τ⁴, *continued*	
1830	D	1830	D	1830	R	1830	R
Dec 5	168° 12′ 45″.39	Oct 1	92° 4′ 9″.21	Dec 13	101° 10′ 44″.62	Dec 23	112° 22′ 53″.93
1830	R			17	42 71		
July 5	168 12 45 37	**45 Ceti θ.**		20	42 92	**19 Eridani τ⁵**	
6	45 82	1830	D				
8	45 03	Dec 5	99 3 46 90	**89 Ceti π**		1830	D
		10	47 83	1830	D	Dec 5	112 12 30 13
Hydri β, SP.		12	47 58	Dec 23	104 34 59 51	10	29 59
1830	D	1830.	R	24	35 1 17	12	30 04
July 3	168 12 44 15	Dec 3	99 3 45 83			1830	R
6	44 98	6	50 32	**1 Eridani τ¹**		Dec 3	112 12 31 08
7	45 04	11	45 42	1830	R	6	29 07
8	44 94			Dec 20	109 17 47 06	11	30 97
9	44 14	**Eridani α**					
		1830	D	**3 Eridani η**		**23 Eridani δ**	
12 Ceti		April 7	148 6 6 82			1830	D
1830	D	19	8 49	1830	D.	Dec 15	100 20 38 12
Sept 18	94 53 50 51	21	8 36	Dec 5	99 34 47 15	18	37 57
19	50 75	26	9 19	10	46 20	1830	R.
21	49 87	May 3	8 35	15	46 94	Dec. 13	100 20 40 86
22	50 30	5	7 24	18	47 55	16	39 01
23	51 81	1830	R.	1830	R		
24	49 67	April 20	148 6 7 52	Dec 3	99 34 46 74	**27 Eridani τ⁶**	
Oct 3	48 59	23	7 72	13	48 99	1830	D
5	50 69	28	8 27	16	46 79	Dec 24	113 45 25 82
8	50 39	May 4	8 34			1830.	R.
10	50 26			**92 Ceti α**		Dec 23	113 45 27 30
11	51 25	**52 Ceti τ**		1830	D		
12	52 52			Nov 15	86 34 56 88	**38 Eridani o¹.**	
16	52 09	1830	D	20	57 02	1830	D.
17	52 16	Dec 24	106 50 8 79	1830.	R	Dec 15	97 17 14 95
18	52 12	1830.	R.	Nov 19	86 34 57 11	18	13 21
19	52 25	Dec 23	106 50 7 98	21	58 49	1830.	R
20	51 34					Dec 16	97 17 12 45
21	52 09	**55 Ceti ζ**		**16 Eridani τ⁴.**		20	14 31
23	49 62	1830	D	1830	D		
28	52 65	Dec 15	101 10 41 79	Dec 24	112 22 55 68		
Nov 6	52 49						
7	51 85						
9	51 93						
10	51 73						
12	50 81						
13	51 18						
14	51 66						
15	51 02						
19	50 81						

Cæli α

1831	D
Jan. 26	132° 11′ (50″64)
31	33 34
Feb 2	32 01

1831	R
Jan 25	132 11 34 14
27	33 22
Feb 1	32 05
3	32 54

61 Eridani ω

1830	D
Dec 15	95 44 36 03
18	36 00

1830	R
Dec 13	95 44 41 54
16	33 41
20	38·95

63 Eridani

1830.	R.
Dec 23	100 31 9·09

67 Eridani β

1831	D
Feb 11	95 18 46 46
15	48 01

1831.	R
Feb 5	95 18 47 83
13	50 02

69 Eridani λ

1831.	D.
Jan 27	98 58 41 82
Feb 2	41 51

1831.	R
Jan 25	98 58 46 44

69 Eridani λ, continued

1831	R
Feb 1	98 58 44 47
3	45 89
4	45 74

19 Orionis β

1830	D.
April 22	98 24 16 46
29	17·14
1831	
Feb. 14	16 54
18	16 35

1831	R
Feb 12	98 24 18 13
17	18 37

20 Orionis τ.

1830	D.
Dec. 15	97 2 8 90
18	6 25

1830.	R
Dec. 16	97 2 8 43
20	6 78

9 Leporis β.

1831	D.
Jan 27	110 54 5·52
Feb 3	4 90

1831	R
Jan. 26	110 54 5 53
31	1·79
Feb. 4	5 40

34 Orionis δ

1830	D
Dec 24	90 25 58 82

1830	R.
Dec 23	90 25 58 55

10 Leporis

1831.	D.
Feb 2	110 59 44 98

11 Leporis α

1831	D
Feb. 11	107 57 0 86
15	0 72

1831	R
Feb 5	107 57 1 06
13	2 98

Columbæ α.

1831	D
Feb 12	124 10 10·35
14	10 99
17	11 16
19	12 32
22	10 82
25	11·59

53 Orionis κ.

1831	D
Mar 1	99 44 12 10
4	11 81

1831.	R.
Feb 26	99 44 13 95
Mar 3	13 12

Columbæ β

1831.	D.
Jan 26	125 50 12 80
27	13 30
31	13 70
Feb. 1	13 62
2	13·37
3	15 70
4	15 33
5	13 79

58 Orionis α

1830	D
April 20	82 37 56 22
24	58 16
30	57 14
July 28	56 79
Dec. 15	56 77
20	59 24
24	56 49

1830	R
April 22	82 37 57 85
29	58 89
July 22	57 55
29	56 15
30	56 24
Dec 18	58 33
23	(51 47)

1 Canis Majoris ζ

1831	D
Feb. 27	119 59 35 75
Mar 1	35 70

1831	R.
Feb 26	119 59 35 48
28	36 72

2 Canis Majoris β

1831.	D.
Feb 19	107 52 41 24
25	40·28

1831	R
Feb. 17	107 52 41 74
22	40 84

Argûs α

1830	D
April 7	142 36 21 24
12	20 89
14	20 17
30	20 21

Argûs α, continued

1830	D.
May 4	142° 36′ 19″82
1831	
Jan 27	19·61
Feb 11	19 78
13	20 18
15	20 96
16	19 41
1830	**R.**
April 13	142 36 19 64
15	21 03
29	19 53
May 3	21 02
5	19 28
1831	
Jan 26	23 19
31	19 78
Feb. 4	22 27
12	20 96
14	20 10

Argûs ν

1831	D.
Feb 19	133 3 4 32
25	4 01
1831.	**R.**
Feb 17	133 3 4 91
26	2 11

9 Canis Majoris α

1830	D
April 12	106 29 26 87
14	23 72
20	23 04
24	23 68
26	23 36
30	22 30
May 4	22 40
1831	
Jan. 27	22 73

9 Canis Majoris α, cont

1831	D
Feb 2	106 29 22 86
5	22 95
12	24 41
14	21 63
Mar 13	26 67
15	24 30
17	24 17
22	23 56
25	23 50
1830	**R**
April 10	106 29 22 03
13	23 71
15	22 57
22	23 85
29	22 19
May 3	24 08
5	23 61
1831	
Jan. 26	25 42
31	25 78
Feb 3	26 89
4	24 73
11	27 53
13	25 43
16	23 90
Mar 7	24 57
14	21 53
16	23 90
21	21 45
24	22 53

22 Canis Majoris

1831.	D.
Mar 3	117 41 49·51
5	49·77
1831	**R**
Mar 2	117 41 46·77
4	45·46

Argûs π

1831.	D
Feb. 11	126° 47′ 49″51
13	48 25
17	49 36
1831.	**R.**
Feb 5	126 47 47 99
12	47 01
16	46 81

31 Canis Majoris η

1831.	D.
Feb 19	118 58 35 59
25	35 82
1831	**R**
Feb 22	118 58 34·07
26	35·97

10 Canis Minoris α

1830.	D.
April 20	84 20 45·84
22	46 25
30	45·42
July 28	45 99
Aug 2	46 32
6	46·75
1831.	
Feb. 2	45·20
4	42 47
5	46·53
12	47 24
13	45·73
1830	**R.**
April 21	84 20 45·63
May 3	47 18
July 22	47·50
30	45 99
1831	
Feb. 3	49 99
15	48 63

Argûs χ

1831	D.
Feb 19	142° 31′ 47″14
25	46 20
1831	**R.**
Feb 17	142 31 45 41
22	45 02

Argûs ζ.

1831	D.
Mar 2	129 31 43 33
4	49 62
5	43 81
1831	**R.**
Mar 1	129 31 41 18
3	39 95

Argûs ε.

1830.	D.
April 7	148 57 52 12
1831	
Feb 19	54 53
25	53 56
1830	**R.**
April 2	148 57 51 33
1831	
Feb. 17	51 86
22	53 77

Argûs δ.

1830.	D.
April 5	144 5 17 48
7	16 88
1831.	
Feb. 19	21 28
25	18 31
1830	**R.**
April 2	144 5 15 93
6	19 22
1831.	
Feb 17	19 43
22	17 84

Argûs λ.

1830	D.
April 5	132 44 57 80
7	59 90
1831.	
Mar. 2	59 04
4	45 0 00
1830	**R**
April 2	132 44 57 18
6	58 83
1831.	
Mar. 1	57 95
3	56 86

Argûs β.

1830.	D
April 5	159 1 3 56
7	3 61
12	3 94
20	1 58
1831	
Feb. 19	1·72
27	1 45
1830	**R**
April 2	159 1 3 41
10	5 59
1831	
Feb 17	4 96
25	2 45

30 Hydræ α

1830	D
April 5	97 55 33 51
7	32 62
12	35 04
20	32 51
1831	
Mar. 14	35 23
17	34 71
22	33 10

30 Hydræ α, continued

1831	D
Mar 25	97 55 35 04
27	34 71
1830	**R**
April 6	97 55 35 24
10	32 98
15	33 78
1831	
Mar 7	33 92
15	34 14
21	33 25
24	34 81
26	35 11

14 Leonis o

1830	D
April 3	79 20 17 12

Argûs v

1830	D
April 5	154 17 6 50
12	7 33
16	5 24
20	5 58
28	6 51
1831	
Feb 19	7 11
28	7 19
1830	**R**
April 2	154 17 6·12
6	5 67
15	4 49
17	4 31
1831.	
Feb. 17	9 86
27	8 33

29 Leonis π

1830	D
April 3	81 8 36 87

32 Leonis α

1830	D
April 3	77 12 18 28
5	18 55
1830	**R**
April 28	77 12 17 86

Argûs θ

1830	D
April 7	153 30 18 45
12	18 93
15	18 84
1830	**R**
April 6	153 30 17 13
10	16 64

Argûs η

1831	D
Mar 2	148 47 32 86
4	34 41
1831	**R**
Mar 1	148 47 30 30
3	33 71

Weisse X—987

1830.	D
April 4	79 54 49 91

63 Leonis χ

1830	D
May 1	81 44 46 61

11 Crateris β

1830.	D
April 22	111 53 56 95
May 4	56 25

11 Crateris β, continued.

1830	R
April 21	111 53 56 73
May 3	57 81

77 Leonis σ

1830	D
April 5	83 2 28 89

Centauri π

1830	D
April 7	143 33 37 56
12	37 08
14	37 41
16	37 39
21	37 25
May 3	37 32
1830	**R**
April 10	143 33 36 25
13	35 69
15	37 95
17	36 14

89 Leonis.

1830	D
April 5	85 59 47 25

Centauri λ

1830	D
April 7	152 4 45 92
12	46 50
15	45 27
16	46 29
21	46·28
May 4	47 56
1830	**R**
April 6	152 4 46 57

91 Leonis υ

1830.	D
May 3	89° 53′ 8″ 31

5 Virginis β.

1830	D
April 6	87 16 38 23

{ 28 Crateris } { B A C 4015 }

1830.	D
April 7	122 57 46 15
12	46 90
15	46 45
May 4	46 41

Centauri δ

1830.	D
April 12	139 46 31 31
15	29 57
21	31 39
May 4	30 86

1830	R
April 13	139 46 30 45
16	29 19
22	29 24

4 Corvi γ

1830.	D
April 22	106 35 51 20

1830	R
April 21	106 35 51 92

Crucis α

1830	D
April 12	152 9 21 41
15	20 35

Crucis α, *continued.*

1830	D
April 16	152° 9′ 21″ 25
21	19 98
22	18 50
28	19 99
May 3	17 26

1830	R
April 26	152 9 19 75
30	19 26
May 5	21 25

29 Virginis γ¹

1830	D
April 6	90 30 56 18

1830	R
April 7	90 30 58 38

Crucis β

1830	D
April 12	148 45 27 32
15	25 62
21	27 99
26	27 63
30	27 06
May 5	26 74

1830	R
April 22	148 45 26 99
28	26 57
May 3	27 56

44 Virginis k

1830	D
May 4	92 53 34 40

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45 Hydrae ψ

1830	D
April 28	112° 12′ 25″ 18
May 4	24 42

1830	R
April 26	112 12 23 82
May 3	26 29

67 Virginis α.

1830	D
April 22	100 16 15 96
28	16 10
May 4	16 60

1830.	R
April 21	100 16 17·49
26	17 29
May 3	17 04
5	21 49

Centauri β

1830.	D
July 26	149 32 50 82
31	49 85
Aug 4	50 94

1830	R
July 28	149 32 49 40
Aug 3	49 67
6	50 13

Centauri α²

1830	D
July 28	150 7 32 39
30	31 77
31	32 23
Aug 4	33 06

Centauri α², *continued.*

1830.	R
July 26	150° 7′ 33″ 29
29	31 81
Aug 3	33 89
6	32 49

33 Draconis γ.

1830	D
July 29	38 29 7 24
30	13 36
31	3 55
Aug. 2	10 47
3	9 03
4	12 04

B A C 6607

1830	D
Sept 15	112 42 38 69

B. A C 7020, SP

1831	D
Jan 27	179 34 0·52
Feb 16	0·94

1831	R
Jan 26	179 33 53 39
31	58 22

53 Aquilæ α

1830	D
Oct 1	81 34 27·06
8	27 86
10	25 56
12	26 16
16	27 91
18	28 10
19	27 25
22	27 92
24	27 91

53 Aquilæ α, *continued*

1830	R
Oct 3	81° 34′ 27″ 86
7	26 66
9	26 98
11	29 05
17	27 33
21	26 11
23	28 15

6 Capricorni α²

1830	D
Sept 14	103 3 54 85
21	55 70
22	55 90

1830	R
Sept 15	103 3 57 04
18	55 92
23	53 46

21 Capricorni

1830	D.
Oct 5	108 11 20 29
8	21 72
9	16 50
11	16 39
12	15 69
16	16 41
17	19 22
18	18 56
19	17 47
21	17 00
22	18 74
23	18 23

9 Aquarii

1830	D
Aug 4	104 11 21 81

29 Capricorni

1830	D
Aug 4	105° 52′ 22″ 06

30 Capricorni

1830	D
Oct 5	108 41 31 02
8	30 30
9	30 94
10	30 42
11	30 37
12	29 80
16	31 13
17	31 83
18	31 19
19	32 13
21	32 34
22	30 76
23	30 80

22 Aquarii β

1830	D.
Sept 14	96 18 50·28

47 Capricorni c²

1830	D
Aug 5	100 3 20 47

34 Aquarii α

1830	D
Sept. 14	91 8 31·38
21	33 10
22	33 46
Oct 28	33 83

34 Aquarii α, *continued*

1830.	D
Nov 1	91° 8′ 32″ 96
7	32 67
10	32 34
13	32 14

1830.	R
Oct 29	91 8 32 84
Nov. 6	30 03
9	32 04
11	32 17
12	32 34

36 Aquarii

1830.	D
Aug. 5	99 1 4 42

90 Aquarii φ

1830	D
Sept 18	96 57 50 67
19	49 45
21	51 47
22	50 73
23	49 68
24	49 16
Oct 1	48 53
3	49 14
4	51 34
5	51 05
9	50 59
10	50 72
11	50 47
12	51 25
16	50 32
17	51 90
18	51·44
19	51 22

90 Aquarii φ, *continued*

1830	D
Oct 20	96° 57′ 52″ 04
21	49 54
23	50 93
28	52 60
29	51 56
Nov 6	52 79
7	51 64
9	50 51
10	50 83
11	50 03
12	50 33
13	50 94
14	50 66
15	50 98
19	50 84
22	50 53

33 Piscium

1830	D
Oct 3	96 39 30 91
5	30 65
8	30 80
9	31 31
10	29 74
11	30 48
12	32 04
16	30 18
17	31 67
18	31 14
19	32 69
20	32 34
21	31 83
23	28 25
Nov 6	31 80
7	30 76
9	27 44
10	30 66
12	31 45
14	30 69

ROYAL OBSERVATORY, CAPE OF GOOD HOPE.

CATALOGUE OF

CONCLUDED MEAN RIGHT ASCENSIONS AND NORTH POLAR DISTANCES,

For 1830, January 1,

OF STARS OBSERVED IN THE YEARS

1829, 1830, and 1831;

WITH THE ANNUAL VARIATIONS.

No	Star's Name	No of Obs of R A	Mean Year and Fraction of Year	Mean R A 1830, Jan 1	Annual Variation in R A	No of Obs of N P D		Mean N P D 1830, Jan 1		Whole No of Obs of N P D	Mean Year and Fraction of Year	Concluded Seconds of N P D	Annual Variation in N P D
						D	R	D	R				
				h m s	°			° ′ ″	″			″	″
1	B A C 5	1	1830 90	0 0 0 72	+3 068			93 10					
2	Phœnicis ε	16	1829 77	0 0 45 49	3 063			136 41					
3	8 Ceti ι	12	1829 80	0 10 45 89	3 057			99 46					
4	B A C 81	1	1829 77	0 15 48 72	3 063			93 10					
5	Hydri β					1	3	168 12 45 39	45 41				
		99	1829 58	0 16 40 31	2 606					9	1830 56	45 06	−19 990
	Hydri [SP] β					5		44 65					
6	Phœnicis α	4	1829 80	0 17 51 74	2 970			133 14					
7	12 Ceti	22	1830 81	0 21 21 96	3 057	29		94 53 51 19		29	1830 80	51·19	19 956
8	Phœnicis λ	2	1829 84	0 23 11 59	2 909			139 45					
9	Toucanæ β¹	2	1829 77	0 23 42 57	2 786			153 54					
10	Weisse O—467	1	1829 70	0 26 14 33	3 062			92 15					
11	14 Ceti	1	1830 75	0 26 49 62	3 064			91 26					
12	B.A C 161	1	1829 70	0 28 45 33	3 074			87 48					
13	16 Ceti β	15	1829 82	0 35 3 13	2 998			108 55					
14	63 Piscium δ	2	1829 70	0 39 52 02	3 095			83 20					
15	20 Ceti	18	1829 90	0 44 19 44	3 059	1		92 4 9 21		1	1830 75	9 21	19 669
16	Sculptoris α	18	1829 85	0 50 24 39	2 898			120 17					
17	Phœnicis β	18	1829 84	0 58 28 85	2 698			137 38					
18	Phœnicis ζ	6	1829 92	1 1 13 10	2 542			146 9					
19	89 Piscium f	1	1829 70	1 9 1 77	3 087			87 17					
20	45 Ceti θ	22	1829 94	1 15 31 67	2 999	3	3	99 3 47·44	47 19	6	1830 93	47 31	18 964
21	B A C 440	1	1829 85	1 19 28 49	3 124			82 55					
22	Phœnicis γ	18	1829 85	1 20 58 28	2 619			134 11					
23	98 Piscium μ	1	1830 98	1 21 17 14	3 111			84 44					
24	Phœnicis δ	9	1829 91	1 24 9 58	2 497			139 57					
25	Eridani α	20	1829 83	1 31 22 17	2 235	6	4	148 6 8 08	7 96	10	1830 31	8 03	18 471
26	B A C 511	1	1829 85	1 31 38 37	3 140			82 6	•				
27	106 Piscium ν	1	1830 98	1 32 35 54	3 111			85 23					
28	52 Ceti τ	10	1830 02	1 36 10 31	2 779*	1	1	106 50 8 79	7 98	2	1830 98	8·39	19 144*
29	110 Piscium o	2	1829·78	1 36 25 33	3 148			81 42					
30	Sculptoris ε	5	1829 74	1 37 40 75	2 800			115 54					
31	55 Ceti ζ	16	1830 08	1 43 4 24	2 953	1	3	101 10 41 79	43 42	4	1830 96	43 01	−18 050
32	Eridani χ	15	1829 87	1 49 19 90	2 270			142 28					
33	Hydri α	12	1829 85	1 53 24 44	1 854			152 24					
34	65 Ceti ξ¹	3	1830 18	2 4 0 02	3 165			81 57					
35	Eridani φ	15	1829 86	2 10 25 78	2 136			142 18					
36	68 Ceti o	1	1829 65	2 10 45 56	3 021			93 45					
37	B A C 741	1	1829 85	2 15 26 22	3 185			81 4					
38	24 Arietis ξ	1	1829 86	2 15 42 78	3 197			80 10					
39	Hydri δ	16	1829 87	2 18 44 75	1 041			159 26					
40	Eridani x	1	1829 65	2 20 45 02	2 199			138 28					
41	29 Arietis	1	1829 86	2 23 36 28	3 267			75 43					
42	76 Ceti σ	15	1829 86	2 24 1 90	2 843			106 0					
43	B A C 789	2	1830 83	2 26 4 64	3 162			83 16					
44	82 Ceti δ	15	1829 85	2 30 46 49	3 062			90 25					
45	B A C 826	2	1830 38	2 32 52 13	+3 211			80 11					

No	Star's Name.	No of Obs. of R A	Mean Year and Fraction of Year	Mean R A. 1830, Jan 1	Annual Variation in R A	No of Obs of N P D D	No of Obs of N P D R	Mean N P D 1830, Jan 1 D	Mean N P D 1830, Jan 1 R	Whole No of Obs of N P D	Mean Year and Fraction of Year	Concluded Seconds of N P D	Annual Variation in N P D
46	38 Arietis	2	1829 86	2 35 42 47	+3 242			78 16					
47	89 Ceti ... π	17	1830 00	2 36 2 07	2 849	2		104 35 0 34		2	1830 98	0 34	—15 574
48	1 Eridani . .. τ¹	1	1830 97	2 37 10 19	2 772		1	109 17 .	47 06	1	1830 97	47 06	15 511
49	43 Arietis ...... σ	1	1829 93	2 42 7 15	3 291			75 37					
50	2 Eridani . . τ²	14	1829 89	2 43 19 72	2 720			111 42					
51	3 Eridani .. . η	20	1830 09	2 48 7 54	2 917	4	3	99 34 46 96	47 51	7	1830 94	47 19	14 887
52	92 Ceti . .. α			2 53 (20)		2	2	86 34 56 95	57 80	4	1830 88	57 38	14 575
53	11 Eridani . .. τ³	14	1829 90	2 54 53 81	2 651			114 18					
54	B A C. 987 .	1	1830 01	3 2 2 43	3 278			77 36					
55	12 Eridani. .	9	1829 94	3 4 51 12	2 561*			119 40					
56	16 Eridani . .. τ⁴	19	1830 02	3 11 57 38	2 659	1	1	112 22 55 68	53 93	2	1830 98	54 81	13 414
57	5 Tauri.. ..f	1	1829 93	3 21 29 99	3 293			77 39					
58	17 Eridani . . .	16	1829 92	3 22 11 24	2 966			95 40					
59	19 Eridani . τ⁵	18	1829 90	3 26 16 84	2 641	3	3	112 12 29 92	30 37	6	1830 93	30 15	12 458
60	B A C. 1119	1	1830 83	3 29 49 73	3 371			74 1					
61	B A C 1125	5	1829 98	3 30 59 69	2 149			130 50					
62	23 Eridani ... δ	19	1830 12	3 35 6 49	2 871	2	2	100 20 37 85	39 94	4	1830 95	38 89	11 243*
63	30 Tauri . e	1	1830 83	3 38 57 62	3 273			79 23					
64	27 Eridani .. ... τ⁶	18	1830 01	3 39 32 12	2 587	1	1	113 45 25 82	27 30	2	1830 98	26 56	10 939*
65	Piazzi III—183	2	1829 98	3 42 19 51	2 202			128 9					
66	B A C 1206 .	1	1829 93	3 43 27 62	3 402			73 11					
67	32 Eridani	16	1829 90	3 45 45 48	+3 001			93 28					
68	Hydri . .γ	1	1829·94	3 49 57 83	—1 068			164 46					
69	34 Eridani. .. γ	15	1829 89	3 50 5 99	+2 787			104 0					
70	35 Tauri. . ... λ	1	1830 01	3 51 16 16	3 309			78 0					
71	35 Eridani ...	1	1829 97	3 52 55 50	3 028			92 2					
72	Reticuli . δ	7	1829 94	3 56 4 16	0 925			151 53					
73	B A C.1272 . .	1	1830 01•	3 58 15 70	3 418			73 7					
74	37 Eridani...	1	1830 95	4 2 5 19	2 918			97 22					
75	38 Eridani . ... o¹	22	1830 15	4 3 34 25	2 919	2	2	97 17 14 08	13 38	4	1830 96	13 73	9 750
76	48 Tauri	1	1830 98	4 6 7 73	3 382			75 2					
77	Horologii .. . α	6	1829 96	4 8 22 27	1 978			132 43					
78	* 7 Mag	1	1829 87	4 9 3 64	2 156			127 39					
79	54 Tauri. ..... γ	3	1830 16	4 10 7 65	3 390			74 47					
80	Reticuli ... . α	6	1829 96	4 12 15 16	0 741			152 54					
81	43 Eridani ..... ν⁵	11	1829 93	4 17 39 10	2 242			124 25					
82	*	3	1830 02	4 17 55 29	3 395			74 50					
83	78 Tauri . .. θ²	1	1830 01	4 18 57 94	3 403			74 31					
84	Reticuli .. η	1	1831 07	4 20 3 91	0·608			153 47					
85	Cæli . .... δ	11	1829 93	4 25 37 85	1 830			135 19					
86	*	1	1830 91	4 25 57 59	3 407			74 31					
87	87 Tauri....... α	6	1830 15	4 26 10 29	3 423			73 50					
88	52 Eridani . .... ν⁷	2	1829 90	4 28 56 74	2 330			120 55					
•89	Doradûs . α	10	1829 93	4 30 19 61	1 278			145 24					
90	Cæli .. .. α	18	1830 38	4 35 5 21	+1 939	2	4	132 11 32 68	32 99	6	1831·08	32 88	— 7 257

No	Star's Name	No of Obs of R A	Mean Year and Fraction of Year	Mean R.A 1830, Jan 1	Annual Variation in R A	No of Obs of N P D		Mean N P D 1830, Jan 1		Whole No of Obs of N P D	Mean Year and Fraction of Year	Concluded Seconds of N P D	Annual Variation in N P D
						D	R	D	R				
91	96 Tauri .	1	1829 94	4 40 1 01	+3 419			74 24					
92	61 Eridani .. ω	16	1830 18	4 44 32 68	2 941	2	3	95 44 36 02	37 97	5	1830 96	37 19	— 6 480
93	63 Eridani .	14	1830 00	4 51 47 78	2 831		1	100 31 .	9 09	1	1830 98	9 09	5 877
94	104 Tauri . . . m	1	1830 01	4 57 24 43	3 542*			71 35					
95	67 Eridani .. β	15	1830 13	4 59 29 72	2 948	2	2	95 18 47 24	48 93	4	1831 11	48 08	5 230
96	15 Orionis . .	2	1829 94	4 59 58 51	3 423			74 38					
97	B A C 1592	1	1831 07	5 0 11 89	2 866			98 53					
98	69 Eridani ... λ	2	1831 08	5 1 0 93	2 864	2	4	98 58 41 67	45 64	6	1831 08	44 31	5 102
99	19 Orionis . β	53	1829 86	5 6 22 23	2 876	4	2	98 24 16 62	18 25	6	1830 85	17 17	4 647
100	20 Orionis .. τ	12	1830 17	5 9 21 26	2 907	2	2	97 2 7 58	7 61	4	1830 96	7 59	4 393
101	6 Leporis . . λ	3	1829 98	5 11 44 68	2 758			103 21					
102	28 Orionis . η	10	1829 77	5 15 55 94	3 009			92 34					
103	117 Tauri	1	1830 01	5 18 9 88	3 472			72 55					
104	9 Leporis .. β	12	1829 91	5 20 57 72	2 565	2	3	110 54 5 20	4 24	5	1831 08	4·63	3 397
105	34 Orionis . δ	45	1829 85	5 23 19 42*	3 058	1	1	90 25 58 82	58 55	2	1830 98	58 69	3 194
106	10 Leporis ..			5 23 (50)		1		110 59 44 98		1	1831 09	44 98	3 148
107	11 Leporis .. α	13	1830 10	5 25 14 03	2 640	2	2	107 57 0 79	2 02	4	1831 11	1 41	3 029
108	122 Tauri	3	1830 36	5 27 12 02	3 471			73 4					
109	123 Tauri . . . . . ζ	1	1829 94	5 27 29 27	3 577			68 58					
110	46 Orionis . . ε	28	1829 50	5 27 35 35	3 038			91 19					
111	48 Orionis . . . . σ	6	1829 93	5 30 12 87	3 005			92 42					
112	126 Tauri	2	1830 54	5 31 28 44	3 459			73 34					
113	50 Orionis . ζ	41	1829 70	5 32 10 96	3 021			92 2					
114	Columbæ . α	21	1830 00	5 33 29 54	2 167	6		124 10 11 21		6	1831 13	11 21	2 313
115	130 Tauri	2	1830 54	5 37 31 52	3 491			72 20					
116	Columbæ μ	8	1829 88	5 39 40 96	2 224			122 23					
117	53 Orionis . κ	35	1829 74	5 39 41 68	2 840	2	2	99 44 11 96	13 54	4	1831·16	12 75	1 774
118	Doradûs .. δ	1	1831 07	5 44 28 23	0 102			155 48					
119	Columbæ . β	5	1830 65	5 44 58 11	2 105	8		125 50 13 95		8	1831 08	13 95	1 314
120	58 Orionis .. α	96	1830 08	5 45 58 19	3 241	7	6	82 37 57 26	57 50	13	1830 59	57 37	— 1 226
121	Columbæ . γ	3	1829 97	5 51 30 67	2 122			125 18					
122	18 Leporis .. θ	9	1829 87	5 58 27 68	2·712			104 56					
123	*	1	1830 02	6 3 41 96	3 549			70 11±					
124	71 Orionis . . .	1	1829 94	6 4 50 80	3 533			70 48					
125	5 Monocerotis .	9	1829 84	6 6 33 88	2 922			96 14					
126	1 Canis Majoris ζ	8	1829 69	6 13 47 23	2 298	2	2	119 59 35 73	36 10	4	1831 16	35 91	+ 1 205
127	2 Canis Majoris β	21	1829 54	6 15 12 85	2 638	12	2	107 52 40 76	41 29	4	1831 14	41 03	1 329
128	Argûs .. . α	33	1830 01	6 20 10 57	1 327	0	10	142 36 20 23	20 68	20	1830 70	20 45	1 762
129	B A C 2116 .	3	1830 37	6 22 23 21	3 497			72 6					
130	24 Geminorum . γ	1	1830 09	6 27 53 49	3 462			73 28					
131	26 Geminorum .	2	1830 06	6 32 30 30	3 493			72 12					
132	Argûs . . ν	16	1829 67	6 32 33 56	1 832	2	2	133 3 4 17	3 51	4	1831 14	3·84	2 838
133	9 Canis Majoris α	39	1829 60	6 37 39 29	2 643*	17	19	106 29 23 66	23 98	36	1830 82	23 83	+ 4·418*
134	33 Geminorum ..	1	1829 94	6 40 2 26	3 455			73 37					
135	13 Canis Majoris κ	8	1829 83	6 43 29 40	+2 238			122 19					

No	Star's Name	No of Obs of R.A.	Mean Year and Fraction of Year	Mean R A 1830, Jan. 1	Annual Variation in R A	No of Obs of NPD		Mean NPD 1830, Jan 1		Whole No of Obs of NPD.	Mean Year and Fraction of Year	Concluded Seconds of NPD	Annual Variation in NPD
						D	R	D	R				
				h m s	s			° ′ ″	″			″	″
136	B A C 2265 .	2	1830 51	6 46 23 13	+3 492			72 3					
137	B A C 2280.	1	1830 02	6 50 4 57	3 446			73 50					
138	21 Canis Majoris. ε	24	1829 61	6 51 56 70	2 354			118 45					
139	22 Canis Majoris	10	1829 79	6 54 56 82	2 387	2	2	117 41 49 64	46 12	4	1831 17	47 88	+ 4 759
140	23 Canis Majoris γ	3	1829 97	6 56 3 98	2 711			105 23					
141	45 Geminorum .	1	1830 02	6 58 36 65	3 444			73 48					
142	* 6 Mag. .	1	1830 24	6 58 42 09	3 502			71 27					
143	25 Canis Majoris δ	12	1829 87	7 1 28 75	2 436			116 8					
144	54 Geminorum λ	4	1830 00	7 8 19 13	3 455			73 10					
145	Argûs .. .. π	17	1829 97	7 11 8 30	2 116	3	3	126 47 49 04	47 27	6	1831 12	48 16	6 121
146	31 Canis Majoris η	15	1829 64	7 17 22·34	2 370	2	2	118 58 35 71	35·02	4	1831 15	35 36	6 638
147	Argûs . .... σ	8	1829 97	7 23 50 21	1 906			132 58					
148	68 Geminorum .	3	1830 07	7 23 53 89	3 430			73 49					
149	74 Geminorum f	1	1830 10	7 29 38·89	3 471			71 57					
150	10 Canis Minoris α	53	1830 09	7 30 23 86	3 143*	11	6	84 20 45 79	47·49	17	1830·72	46 39	8 682*
151	Puppis . . c	2	1830 15	7 39 11 87	2 135			127 34					
152	Puppis. ... P	3	1830 15	7 44 3 55	1 827			135 57					
153	1 Cancri . .	1	1830 10	7 47 19·59	3 415			73 46					
154	B A C 2649 ..	1	1830 99	7 48 49 04	3 431			73 2					
155	5 Cancri	2	1830 13	7 51 48·19	3 427			73 5					
156	Argûs . .... χ	14	1829 74	7 52 27·10	1 530	2	2	142 31 46 67	45·22	4	1831·14	45 94	9 445
157	Argûs . ... ζ	17	1829 61	7 57 36 58	2 108	3	2	129 31 45 59	40 57	5	1831 17	43 58	9 840
158	Argûs . . γ	15	1829 59	8 4 17 44	1 848			136 50					
159	Puppis . ... q	4	1830 15	8 12 11·69	2 250			126 8					
160	Argûs .. . ... ι	17	1829 70	8 19 0 78	1 243	3	3	148 57 53 40	52 32	6	1830·85	52 86	11 426
161	29 Cancri . ..	1	1830 25	8 19 7 40	3 357			75 14					
162	Volantis . . β	1	1830 15	8 23 51 49	0 686			155 34					
163	{Mali . b} {Pixidis Nauticæ β}	4	1830 15	8 33 26 99	2 342			124 43					
164	B A C 2941	1	1830 09	8 34 4 80	2 201			129 40					
165	{Mali .. a} {Pixidis Nauticæ α}	4	1830 15	8 36 45 82	2·406			122 35					
166	50 Cancri . . A²	1	1830 18	8 37 36 45	3 301			77 16					
167	Argûs ..... δ	16	1829 61	8 40 0 37	1·655	4	4	144 5 18 49	18 11	8	1830·70	18 30	12 884
168	65 Cancri . . α	1	1830 18	8 49 10·84	3 287			77 29					
169	Carinæ .. b¹	2	1830 12	8 52 48 36	1·474			148 35					
170	Carinæ ... . b²	1	1830 09	8 55 13 50	1·498			148 26					
171	76 Cancri . ..... χ	1	1830 18	8 58 31·89	3 259			78 39					
172	Argûs . λ	14	1829 42	9 1 44 84	2 201	4	4	132 44 59 19	57·71	8	1830 71	58·45	14 280
173	B A C 3164	1	1830 25	9 8 37 57	3 265			77 47					
174	Argûs . . . β	14	1829 33	9 11 17 92	0 729	6	4	159 1 2 64	4 10	10	1830 62	3 23	14·855
175	Argûs ... ι	1	1829 38	9 12 32 00	1 609			148 34					
176	{Mali .. h} {Pixidis Nauticæ θ}	3	1830 18	9 13 58 35	2 650			115 15					
177	Argûs . κ	11	1829 33	9 16 51 04	1 854			144 17					
178	30 Hydræ .. . α	12	1829 70	9 19 13 98	2 948	9	8	97 55 34 05	34 15	17	1830 83	34 10	15 310
179	6 Leonis . h	1	1830 25	9 22 50 61	3 224			79 32					
180	14 Leonis .... ο	1	1830 25	9 32 4 08	+3 219	1		79 20 17 12		1	1830 25	17 12	+16 010

No	Star's Name	No of Obs of R A	Mean Year and Fraction of Year	Mean R A 1830, Jan 1	Annual Variation in R A	No of Obs of NPD		Mean NPD 1830, Jan 1		Whole No. of Obs of NPD	Mean Year and Fraction of Year	Concluded Seconds of NPD	Annual Variation in NPD
						D	R	D	R				
181	Argûs ... υ	14	1829 34	9 42 50 92	+1 505	7	6	154 17 6 49	6 46	13	1830 55	6 48	+16 560
182	29 Leonis . . π	1	1830 10	9 51 13 41	3 179	1		81 8 36 87		1	1830 25	36 87	16 961
183	31 Leonis A	2	1830 18	9 58 52 57	3 197			79 10					
184	32 Leonis α	3	1829 60	9 59 18 62	3 221	2	1	77 12 18 42	17 86	3	1830 28	18 23	17 327
185	16 Sextantis .	1	1830 26	10 0 19 88	3 150			83 0					
186	B A.C 3538	1	1830 33	10 13 15 96	3 172			80 11					
187	43 Leonis .	1	1830 26	10 14 6 31	3 145			82 36					
188	44 Leonis .	1	1830 18	10 16 17 39	3 167			80 21					
189	32 Sextantis .	1	1830 18	10 23 28 33	3 121			84 29					
190	49 Leonis .	1	1830 10	10 26 6 33	3 157			80 28					
191	35 Sextantis . .	1	1830 18	10 34 31 21	3 116			84 22					
192	Argûs . θ	14	1829 34	10 36 54 62	2 117	3	2	153 30 18 74	16·89	5	1830·27	18 00	18 739
193	37 Sextantis	1	1830 33	10 37 14 45	3 128			82 44					
194	Argûs . η	3	1829 29	10 38 28 95	2 300	2	2	148 47 33 64	32 01	4	1831·17	32 82	18 789
195	Argûs .. μ	3	1829 35	10 39 28 69	2 548			138 31					
196	7 Crateris ... α	13	1829 35	10 51 29 81	2 905*			107 24					
197	59 Leonis c	2	1830 22	10 51 55 81	3 116			82 59					
198	Weisse X—987			10 53 (40)		1		79 54 49 91		1	1830 26	49 91	19 210
199	63 Leonis . χ			10 56 (10)		1		81 44 46 61		1	1830 33	46 61	19 272
200	65 Leonis . . p³	3	1830 18	10 58 13 82	3 086			87 7					
201	11 Crateris . . β	9	1829 37	11 3 18 34	2 937	2	2	111 53 56 60	57·27	4	1830 32	56 94	19·433
202	75 Leonis .	1	1830 18	11 8 32 40	3 083			87 3					
203	77 Leonis . σ			11 12 (20)		1		83 2 28 89		1	1830 26	28 89	19 611
204	Centauri . π	11	1829 38	11 13 16 88	2 702	6	4	143 33 37 34	36 51	10	1830·27	37 00	19 627
205	79 Leonis	1	1830 18	11 15 18 91	3 079			87 39					
206	80 Leonis	1	1830 11	11 17 5 70	3 089			85 12					
207	B A C 3901	1	1830 33	11 19 12 42	3 065			90 46					
208	89 Leonis .			11 25 (40)		1		85 59 47 25		1	1830 26	47 25	19·818
209	Centauri . λ	14	1829 35	11 27 58 86	2·717	6	1	152 4 46 31	46·57	7	1830·29	46 34	19 847
210	91 Leonis . . υ			11 28 (10)		1		89 53 8 31		1	1830·33	8 31	19 850
211	94 Leonis .. β	1	1829·27	11 40 22 87	3 064*			74 29					
212	5 Virginis . β			11 41 (50)		1		87 16 38 23		1	1830·26	38 23	19 980
213	B A.C. 4015	10	1829 37	11 44 20 33	3 009	4		122 57 46 48		4	1830·29	46·48	19 996
214	B.A C 4054 ...	2	1830 22	11 52 19 62	3 067			90 49					
215	B.A C 4077 .	2	1830 22	11 57 17 70	3 067			92 11					
216	B A.C 4085 .	10	1829 36	11 59 19 15	3 063			139 43					
217	Centauri . δ	18	1829 34	11 59 35 09	3 065	4	3	139 46 30 78	29 63	7	1830 30	30·29	20·043
218	Crucis . δ	11	1829 32	12 6 9 99	3 125			147 48					
219	4 Corvi. γ	8	1829 36	12 7 4 50	3 080	1	1	106 35 51 20	51·92	2	1830 30	51·56	20 033
220	Chamæleontis β	9	1829 68	12 8 32 89	3 313			168 22					
221	13 Virginis .	1	1830·33	12 9 57 46	3 068			89 50					
222	B A.C 4172	1	1830 26	12 14 31 48	3 074			94 2					
223	Crucis . α	1	1829·82	12 17 12 66	3 258	7	3	152 9 19 82	20 09	10	1830·31	19·90	+19·986
224	7 Corvi .... δ	1	1829·39	12 21 4 74	3 102			105 34					
225	Crucis . .. γ	3	1829 33	12 21 47 11	+3 257			146 9					

No	Star's Name	No. of Obs of R.A	Mean Year and Fraction of Year.	Mean R A 1830, Jan 1.	Annual Variation in R A	No of Obs of N P D		Mean N P D 1830, Jan 1.		Whole No. of Obs of N P D	Mean Year and Fraction of Year	Concluded Seconds of N P D	Annual Variation in N P.D
						D	R	D	R.				
				h m s	s			° ′ ″	″			″	″
226	B A C 4225 ..	1	1830 26	12 22 54 67	+3 078			94 7					
227	9 Corvi .... β	15	1829 36	12 25 28 33	3 129			112 27					
228	B A C 4255	2	1830 30	12 29 59 17	3 079			93 26					
229	Centauri . γ	16	1829 35	12 32 10 85	3 276			138 1					
230	29 Virginis . . γ¹	1	1830 19	12 33 2 97	3 022*	1	1	90 30 56 18	58 38	2	1830 26	57 28	+19 835
231	Crucis . β	17	1829 33	12 37 50 98	3 430	6	3	148 45 27 06	27·04	9	1830 31	27 05	19 770
232	B A C 4294	1	1830 26	12 38 46 72	3 089			95 22					
233	44 Virginis . . k			12 50 (50)		1		92 53 34 40		1	1830 34	34 40	19 550
234	45 Hydiæ . . ψ	14	1829 38	12 59 54 90	3 209	2	2	112 12 24 80	25 06	4	1830 33	24 93	19 362
235	Centauri . ι	21	1829 38	13 11 4 19	3 362			125 49					
236	* . .	1	1829 33	13 12 2 26	3 366			125 49±					
237	67 Virginis . . α	45	1829 91	13 16 14 86	3 147	3	4	100 16 16 22	18 33	7	1830 32	17 42	18·944
238	77 Virginis .	1	1830 27	13 24 32 25	3 125			96 45					
239	Centauri . ε	16	1829 33	13 29 10·37	3 731			142 36					
240	Centauri . . ζ	17	1829 34	13 44 58 75	3 690			136 27					
241	B A C 4647 .	1	1830 34	13 46 3 82	3 144			97 13					
242	B A C 4666	2	1830 30	13 51 7 86	3 148			97 20					
243	Centauri . β	15	1829 32	13 51 54 34	4 134	3	3	149 32 50 54	49 73	6	1830 58	50 14	17 700
244	B A C 4680 .	1	1830 34	13 55 21 81	3 164			98 26					
245	5 Centauri . θ	20	1829 41	13 56 42 46	3 491*			125 32					
246	100 Virginis . λ	14	1829 41	14 9 55 52	3 228			102 35					
247	B A C 4807	1	1829 32	14 23 23 34	3 757			131 21					
248	Centauri .. η	13	1829 35	14 24 44 93	3 764			131 24					
249	Centauri .. α²	11	1829 36	14 28 7 47	4 000*	4	4	150 7 32 36	32 87	8	1830 58	32 62	+15 165*
250	Lupi .. α	7	1829 38	14 30 39 94	3 933			136 39					
251	9 Libræ α	20	1829 39	14 41 29 29	3 305			105 20					
252	20 Libræ .	14	1829 45	14 54 8 29	3 490			114 36					
253	Trianguli Aus γ	13	1829 34	15 3 10 01	5 444			158 2					
254	27 Libræ β	18	1829 44	15 7 52 19	3 218			98 45					
255	Lupi . γ	11	1829 36	15 23 50 55	3 957			130 35					
256	Trianguli Aus β	10	1829 34	15 40 14 58	5 208			152 53					
257	46 Libræ . θ	2	1830 50	15 44 9 44	3 390			106 13					
258	7 Scorpii δ	20	1829 44	15 50 17 67	3 527			112 8					
259	49 Libræ . .	3	1829 90	15 50 47 84	3 342*			106 2					
260	8 Scorpii . β	24	1829 48	15 55 33 86	3 469			109 20					
261	B A C 5330	1	1829 61	15 55 34 86	3 469			109 20					
262	14 Scorpii... ν	1	1829 60	16 2 7 53	3 469			109 1					
263	1 Ophiuchi δ	29	1829 47	16 5 26·66	3 135			93 15					
264	2 Ophiuchi . ε	24	1829 49	16 9 20 03	3 156			94 16					
265	4 Ophiuchi . ψ	6	1829 57	16 14 10 00	+3 495			109 38					

No 249. The proper motions — 0ˢ 470 in R.A , — 0″ 83 in N P D from B A C have been applied to the Precession in R A and N P D as given in the A S C

No	Star's Name		No of Obs of R A	Mean Year and Fraction of Year	Mean R A 1830, Jan 1	Annual Variation in R A	No of Obs of N P D		Mean N P D 1830, Jan 1		Whole No of Obs of N P D	Mean Year and Fraction of Year	Concluded Seconds of N P D	Annual Variation in N P D
							D	R	D	R				
					h m s	s		″	° ′ ″	″			″	″
266	7 Ophiuchi	χ	1	1830 50	16 17 10 83	+3 461			108 4					
267	21 Scorpii	α	43	1829 73	16 18 59 78	3 659			116 3					
268	8 Ophiuchi	φ	4	1829 79	16 21 25 01	3 422			106 14					
269	23 Scorpii	τ	10	1829 59	16 25 18 75	3 715			117 51					
270	Trianguli Aus	α	14	1829 42	16 30 44 62	6 239			158 42					
271	{ B A C 5579 } { 24 Scorpii }		1	1830 50	16 31 45 08	3 456			107 24					
272	26 Scorpii	ε	16	1829 45	16 39 9 94	3 870*			123 59					
273	B A C 5700		1	1830 58	16 47 5 11	3 512			109 16					
274	B A C 5712		3	1830 23	16 49 50 96	3 481			107 58					
275	Octantis	σ	10	1829 36	16 55 3 70	101 071			179 15					
276	35 Ophiuchi	η	20	1829 48	17 0 38 08	3 426			105 30					
277	B A C 5839		1	1829 60	17 10 0 09	3 481			107 34					
278	Aræ	γ	9	1829 61	17 11 6 39	5 019			146 12					
279	Aræ	α	18	1829 50	17 18 42 87	4 620			139 44					
280	35 Scorpii	λ	13	1829 50	17 22 4 38	4 060			126 58					
281	Scorpii	θ	15	1829 51	17 25 6 75	4 294			132 53					
282	55 Serpentis	ξ	1	1829 68	17 27 51 56	3 430			105 17					
283	Scorpii	κ	16	1829 51	17 30 44 02	4 139			128 56					
284	Scorpii	ι¹	15	1829 47	17 35 42 03	4 185			130 3					
285	64 Ophiuchi	ν	3	1829 67	17 49 40 33	3 297			99 45					
286	33 Draconis	γ			17 52 (40)		6		38 29	9 28	6	1830 58	9 28	+0 642
287	Aræ	θ	2	1829 68	17 53 24 08	4 665			140 5					
288	13 Sagittarii	μ	14	1829 59	18 3 35 92	3 583			111 6					
289	B A C 6195		1	1829 61	18 7 30 28	3 515			108 31					
290	20 Sagittarii	ε	20	1829 53	18 12 53 27	3 983			124 27					
291	21 Sagittarii		1	1830 58	18 15 13 56	3 570			110 37					
292	B A C 6267		1	1829 68	18 18 1 48	3 495			107 54					
293	Telescopii	δ¹	4	1829 67	18 19 9 65	4 448			136 1					
294	Telescopii	δ²	5	1829 67	18 19 27 47	4 440			135 52					
295	Pavonis	ζ	5	1829 66	18 23 8 22	7 054			161 33					
296	B A C 6340		1	1829 68	18 27 59 26	3 483			107 22					
297	2 Aquilæ		3	1829 69	18 32 58 01	3 282			99 12					
298	27 Sagittarii	φ	6	1829 66	18 35 2 07	3 745			117 9					
299	29 Sagittarii		4	1830 34	18 39 34 92	3 560			110 31					
300	34 Sagittarii	σ	27	1829 55	18 44 43 24	3 722			116 30					
301	38 Sagittarii	ζ	20	1829 62	18 51 47 43	3 823			120 7					
302	40 Sagittarii	τ	2	1829 70	18 56 19 33	3 755			117 55					
303	16 Aquilæ	λ	24	1829 55	18 57 13 59	3 184			95 8					
304	41 Sagittarii	π	1	1829 71	18 59 39 01	3 571			111 17					
305	20 Aquilæ		5	1829 66	19 3 27 42	3 254			98 13					
306	{ Sagittarii β¹ } { (1st Star) }		17	1829 65	19 10 24 03	4 331			134 46					
307	B A C 6607				19 10 (30)		1		112 42	38 69	1	1830 70	38 69	−6 064
308	44 Sagittarii	ϱ¹	1	1829 76	19 11 48 56	3 485			108 10					
309	45 Sagittarii	ϱ²	1	1830 58	19 11 55 60	3 496			108 37					
310	Sagittarii	α	2	1829 70	19 12 5 78	+4 170			130 55					

No	Star's Name	No of Obs of R A	Mean Year and Fraction of Year	Mean R A 1830, Jan 1	Annual Variation in R A	No of Obs of N P D D	No of Obs of N P D R	Mean N P D 1830, Jan 1 D	Mean N P D 1830, Jan 1 R	Whole No of Obs of N P D	Mean Year and Fraction of Year	Concluded Seconds of N P D	Annual Variation in N P D
				h m s	s			° ′ ″	″			″	″
311	30 Aquilæ . ♂	3	1829 75	19 16 55 60	+3 007			87 13					
312	B A C 6658 ..	1	1830 51	19 18 11 57	3 494			108 42					
313	B A C 7020. B A C 7020 [SP]	10	1829 71	19 26 13 29	167 172	2	2	179 33 60 73	55 81	4	1831 09	58·27	−7 363
314	B A C 6707. .	1	1830 51	19 26 31 16	3 501			109 13					
315	39 Aquilæ .. . ϰ	14	1829 65	19 27 44 61	3 229			97 24					
316	54 Sagittarii .. . e¹	1	1829 65	19 30 58 76	3 437			106 40					
317	55 Sagittarii ... e²	13	1829 64	19 32 47 42	3 432			106 31					
318	50 Aquilæ . . γ	8	1830 08	19 38 10 66	2 849			79 48					
319	57 Sagittarii . .	1	1830 58	19 42 18 64	3 494			109 28					
320	53 Aquilæ ,. ... α	80	1830 13	19 42 29 30	2 924*	9	7	81 34 27 30	27 45	16	1830 78	27 37	8 667
321	59 Sagittarii b	3	1829 71	19 46 30 21	3 693			117 37					
322	60 Aquilæ . .. β	9	1830 04	19 46 57 81	2 943			84 1					
323	62 Sagittarii . . c	17	1829 67	19 52 11 68	3 700			118 10					
324	63 Sagittarii .	1	1829 61	19 52 26 87	3 364			104 6					
325	65 Aquilæ .... θ	17	1829 66	20 2 31 90	3 095			91 19					
326	6 Capricorni . α²	21	1829 64	20 8 37 00	3 331	3	3	103 3 55 48	55 47	6	1830 71	55·48	10 667
327	7 Capricorni . σ	1	1830 81	20 9 34 72	3 471			109 38					
328	9 Capricorni .. β	11	1829 84	20 11 27 15	3 375			105 19					
329	Pavonis .... α	10	1829 59	20 12 8 66	4 811			147 16					
330	10 Capricorni . π	9	1829 82	20 17 34 97	3 443			108 46					
331	11 Capricorni ℓ	1	1830 81	20 19 9 23	3 432			108 22					
332	69 Aquilæ .	9	1829 71	20 20 45 69	3 134			93 27					
333	B A C 7078 .	1	1830 59	20 22 53 50	3 404			107 11					
334	B A C 7087	1	1829 61	20 24 43 40	3 343			104 18					
335	Indi . α	22	1829 61	20 25 34 59	4 257			137 53					
336	B A C 7097 .	2	1830 55	20 25 54 63	3 399			107 6					
337	13 Capricorni .. τ¹	1	1830 66	20 27 48 89	3 369			105 44					
338	Pavonis . β	17	1829 64	20 29 31 94	5 546			156 48					
339	B A C 7145 .	2	1830 55	20 30 58 91	3 385			106 43					
340	16 Capricorni . ψ	4	1829 72	20 36 1 01	3 572			115 52					
341	2 Aquarii . s	1	1829 84	20 38 28 05	3 252			100 7					
342	Microscopii α	1	1829 73	20 39 19 69	3 771			124 24					
343	B A C 7209 .	2	1830 62	20 39 41 40	3 414			108 39					
344	Indi . .. β	15	1829 67	20 41 27 53	4 768			149 5					
345	7 Aquarii . .	1	1829 62	20 47 42 26	3 249			100 20					
346	21 Capricorni .	9	1830 79	20 51 17 22	3 390	12		108 11 18 02		12	1830 79	18 02	13 623
347	9 Aquarii .	1	1829 61	20 51 45 71	3 315	1		104 11 21 81		1	1830 59	21 81	13 654
348	22 Capricorni . η	22	1829 70	20 54 43 15	3 430			110 31					
349	13 Aquarii . .. y	22	1829 70	21 0 19 60	3 270			102 3					
350	29 Capricorni	12	1829 81	21 6 19 77	3 329	1		105 52 22 06		1	1830 59	22 06	14 558
351	30 Capricorni .	11	1830 78	21 8 24 67	3 376	13		108 41 31·00		13	1830 79	31·00	−14 683
352	B A C 7406..	1	1829 62	21 12 10 65	4 496			147 58					
353	Pavonis.. . γ	9	1829 67	21 12 16 35	5 086			156 8					
354	18 Aquarii.	1	1829 69	21 14 53 66	3 281			103 36					
355	19 Aquarii. .. .	1	1829 62	21 16 4 24	+3 230			100 28					

No.	Star's Name		No of Obs of R A	Mean Year and Fraction of Year	Mean R A 1830, Jan 1	Annual Variation in R A	No of Obs of N P D		Mean N P D 1830, Jan 1.		Whole No of Obs of N P D	Mean Year and Fraction of Year	Concluded Seconds of N P D	Annual Variation in N P D
							D	R	D	R				
					h m s	s			° ′ ″	″	″		″	″
356	34 Capricorni .	ζ	15	1829 71	21 16 56 89	+3 441			113 8					
357	22 Aquarii .	β	16	1829 71	21 22 36 29	3 162	1		96 18 50 28		1	1830 70	50 28	—15 499
358	23 Aquarii .	ξ	1	1829 62	21 28 41 67	3 192			98 37					
359	40 Capricorni	γ	11	1829 68	21 30 39 71	3 322			107 25					
360	42 Capricorni .		1	1829 69	21 32 17 68	3 280			104 48					
361	46 Capricorni	c¹	1	1829 69	21 35 55 97	3 205			99 51					
362	47 Capricorni	c²	2	1830 22	21 37 11 74	3 206	1		100 3 20 47		1	1830 59	20 47	16 276
363	48 Capricorni	λ	1	1829 84	21 37 22 67	3 236			102 9					
364	49 Capricorni	δ	9	1829 68	21 37 38 91	3 304			106 54					
365	Gruis .	γ	8	1829 69	21 43 36 51	3 657			128 10					
366	31 Aquarii	o	2	1829 76	21 54 30 93	3 104			92 58					
367	34 Aquarii	a	10	1830 16	21 57 3 01	3 082	8	5	91 8 32 74	31 88	13	1830 82	32·41	17 227
368	33 Aquarii	i	1	1829 84	21 57 14 93	3 247			104 41					
369	Gruis .	a	2	1829 69	21 57 28 47	3 818			137 47					
370	36 Aquarii .		2	1830 22	22 0 27 30	3 174	1		99 1 4 42		1	1830 59	4 42	17 375
371	37 Aquarii	e¹	1	1829 62	22 1 27 03	3 204			101 39					
372	38 Aquarii .	e²	1	1830 67	22 1 31 88	3 213			102 24					
373	B A C 7726		1	1829 70	22 1 41 60	3 127			95 6					
374	Toucanæ .	a	6	1829 71	22 6 46 50	4 216			151 6					
375	42 Aquarii		3	1830 72	22 7 41 40	3 221			103 40					
376	43 Aquarii	θ	2	1829 62	22 7 51 40	3 163			98 38					
377	B A C 7774 .		1	1830 59	22 7 53 70	3 177			99 53					
378	48 Aquarii .	γ	7	1829 69	22 12 52 31	3 092			92 14					
379	B A C 7804		1	1829 62	22 14 37 07	3 152			98 3					
380	51 Aquarii		1	1829 70	22 15 15 19	3 127			95 42					
381	55 Aquarii . .	ζ	10	1829 74	22 20 4 56	3 077			90 53					
382	62 Aquarii .	η	8	1829 81	22 26 37 18	3 077			90 59					
383	63 Aquarii	κ	1	1829 70	22 28 56 93	3 114			95 6					
384	Gruis .	β	14	1829 73	22 32 28 57	3 617			137 46					
385	67 Aquarii		2	1830 18	22 34 21 34	3 135			97 51					
386	Gruis	ι	11	1829 76	22 38 14 28	3 670			142 12					
387	Lalande 44564		1	1830 82	22 38 30 19	3 130			97 37					
388	73 Aquarii .	λ	14	1829 75	22 43 44 43	3 133			98 29					
389	76 Aquarii .	δ	7	1829 70	22 45 37 22	3 196			106 43					
390	B A C 7986		1	1829 77	22 46 22 02	3 112			95 53					
391	24 Piscis Aust	a	20	1829 75	22 48 14 25	3 311			120 31					
392	3 Piscium		1	1829 62	22 51 54 79	3 073			90 43					
393	81 Aquarii		1	1830 82	22 52 33 44	3 122			97 58					
394	B A C 8019		1	1829 70	22 53 4 57	3 050			87 23					
395	83 Aquarii . .	h¹	1	1829 85	22 56 17 49	3 124			98 36					
396	84 Aquarii	h²	1	1829 85	22 56 27 49	3 124			98 40					
397	Gruis .	ι	14	1829 76	23 0 42 12	3 424			136 10					
398	89 Aquarii .	c³	2	1829 84	23 0 49 49	3 216			113 23					
399	90 Aquarii	φ	18	1830 52	23 5 31 00	3 106	34		96 57 50 76		34	1830 80	50 76	—19 479
400	Toucanæ	γ	14	1829 74	23 7 26 97	+3 577			149 10					

No	Star's Name	No of Obs of R A	Mean Year and Fraction of Year	Mean R A 1830, Jan 1	Annual Variation in R A	No of Obs of N P D		Mean N P D 1830, Jan 1		Whole No of Obs of N.P D	Mean Year and Fraction of Year	Concluded Seconds of N P D	Annual Variation in N P D
						D	R	D	R				
				h m s				° ′ ″	″			″	″
401	93 Aquarii .. . ψ²	2	1829 84	23 9 3 92	+3 121			100 6					
402	96 Aquarii .	1	1829 70	23 10 34 90	3 098			96 3					
403	B A C 8129	1	1830 82	23 11 55 04	3 101			96 50					
404	98 Aquarii . . δ¹	16	1829 79	23 14 1 94	3 170			111 2					
405	B A C. 8152 .	1	1829 70	23 14 48 58	3 071			90 38					
406	99 Aquarii . . b²	7	1829 83	23 17 6 44	3 166			111 34					
407	8 Piscium ... x	1	1829 85	23 18 13 15	3 067			89 40					
408	B A C 8184 .	2	1830 26	23 20 44 70	3 090			95 27					
409	12 Piscium	1	1829 70	23 20 47 21	3 076			91 58					
410	13 Piscium	1	1829 77	23 23 14 37	3 076			92 1					
411	Sculptoris β	15	1829 77	23 23 49 94	3 237			128 45					
412	14 Piscium .	3	1830 15	23 25 24 61	3 076			92 11					
413	B A C 8214	1	1829 70	23 26 45 66	3 097			98 24					
414	103 Aquarii . A¹	19	1829 78	23 32 45 04	3 123			108 58					
415	106 Aquarii . i¹	7	1829 84	23 35 22 64	3 118			109 13					
416	20 Piscium .	4	1829 96	23 39 12 17	3 076			93 42					
417	Sculptoris δ	15	1829 75	23 40 3 39	3 133			119 4					
418	Octantis . γ²	1	1829 87	23 47 55 76	3 651			173 7					
419	27 Piscium . .	5	1830 04	23 49 58 17	3 073			94 30					
420	Toucanæ ... ε	11	1829 73	23 51 1 05	3 189			156 31					
421	29 Piscium .	3	1829 84	23 53 6 81	3 071			93 58					
422	2 Ceti . .	7	1829·79	23 55 1 40	3 078			108 17					
423	B A C 8365	1	1829 77	23 56 20 95	3 069			91 27					
424	33 Piscium	15	1830 74	23 56 38 07	3 070	20		96 39 30 84		20	1830 80	30 84	−20 040
425	4 Ceti .. .	2	1830 22	23 59 1 85	+3 068			93 30					

ROYAL OBSERVATORY, CAPE OF GOOD HOPE.

RIGHT ASCENSIONS AND NORTH POLAR DISTANCES

OF

THE SUN,

THE MOON,

MERCURY, ·

VENUS,

MARS,

JUPITER,

SATURN,

URANUS,

And the Comet of 1830,

·

DEDUCED FROM THE OBSERVATIONS

MADE IN THE YEARS

1829, 1830, AND 1831.

Right Ascensions and North Polar Distances of the Sun, observed at the Cape of Good Hope.

Year and Civil Day	R A of Centre.	Limb observed in N P D	N P.D of Limb	N P D of Centre	Parallax used in the Reductions
1829.	h m s				
April 11	1 18 38 63				
13	1 25 59 32				
14	1 29 41 20				
15	1 33 21 41				
20	1 51 53 59				
21	1 55 36 89				
22	1 59 21 07				
25	2 10 35 97				
26	2 14 21 86				
30	2 29 30 81				
May 1	2 33 19 66				
2	2 37 8 64				
6	2 52 30 97				
11	3 11 56 36				
12	3 15 50 77				
13	3 19 46 58				
14	3 23 42 26				
15	3 27 38 14				
16	3 31 35 51				
18	3 39 31 07				
19	3 43 29 34				
21	3 51 28 34				
22	3 55 28 81				
23	3 59 29 67				
June 16	5 37 57 37				
18	5 46 16·29				
July 6	7 0 53 30				
7	7 4 59 71				
8	7 9 5 89				
11	7 21 21 88				
13	7 29 30 35				
14	7 33 33·85				
15	7 37 37 09				
16	7 41 39 38				
21	8 1 44 10				
22	8 5 43 41				
23	8 9 42·27				
24	8 13 40 50				
25	8 17 38 26				
27	8 25 31 91				
Aug. 7	9 8 14 07				
8	9 12 3 23				

Year and Civil Day	R.A. of Centre	Lumb observed in N P D	N P D of Lumb	N.P.D. of Centre	Parallax used in the Reductions.
1829.	h m s				
Aug. 15	9 38 31 67				
17	9 46 0 50				
19	9 53 27 28				
26	10 19 17 47				
27	10 22 57 32				
28	10 26 36 49				
29	10 30 15 58				
Sept 2	10 44 48 97				
3	10 48 26 29				
4	10 52 3 47				
7	11 2 53 25				
13	11 24 28 37				
14	11 28 3 57				
15	11 31 38 92				
16	11 35 14 54				
17	11 38 50 11				
18	11 42 25 32				
19	11 46 0 70				
20	11 49 36 05				
21	11 53 11 47				
22	11 56 47 15				
24	12 3 58 88				
25	12 7 34 98				
27	12 14 47 64				
Oct 1	12 29 15 66				
2	12 32 53 30				
3	12 36 31 20				
6	12 47 27 13				
9	12 58 26 38				
10	13 2 6 91				
22	13 46 55 53				
24	13 54 32 86				
26	14 2 12 78				
27	14 6 3 95				
28	14 9 56 02				
29	14 13 48 08				
30	14 17 41 66				
31	14 21 35·90				
Nov 3	14 33 22 53				
4	14 37 19 91				
5	14 41 18 10				
6	14 45 16 88				
10	15 1 20 66				
14	15 17 37 80				
17	15 30 0 25				
19	15 38 18 98				
20	15 42 29 65				
21	15 46 41 28				
23	15 55 7 00				

Year and Civil Day	R. A. of Centre	Limb observed in N P D	N P D of Limb.	N P D of Centre	Parallax used in the Reductions
1829	h m s				
Nov 24	15 59 20 86				
25	16 3 35 92				
26	16 7 51 53				
27	16 12 7 75				
28	16 16 24 72				
Dec. 1	16 29 19 55				
7	16 55 26 32				
10	17 8 36 20				
26	18 19 32 21				
29	18 32 51 36				
1830.					
Jan 4	18 59 21 75				
5	19 3 45 70				
7	19 12 31 92				
9	19 21 15 79				
11	19 29 57 65				
12	19 34 17 59				
13	19 38 37 04				
14	19 42 55 85				
15	19 47 14 21				
18	20 0 4 84				
19	20 4 20 18				
21	20 12 48 79				
22	20 17 2 18				
23	20 21 14 88				
25	20 29 37 45				
28	20 42 5 03				
Feb 3	21 6 37 74				
4	21 10 40 47				
6	21 18 42 87				
8	21 26 42 39				
9	21 30 40 71				
10	21 34 38 29				
13	21 46 26 43				
15	21 54 14 88				
16	21 58 8 22				
17	22 2 0 87				
18	22 5 52 37				
22	22 21 13 39				
23	22 25 1 62				
24	22 28 49 71				
26	22 36 23 28				
27	22 40 9 40				
March 6	23 6 17 26				
8	23 13 40 93				
9	23 17 22 43				
12	23 28 23 89				
16	23 43 2 16				

Year and Civil Day	R.A of Centre	Limb observed in N P D	N P D of Limb	N P D of Centre	Parallax used in the Reductions
1830.	h m s		o ′ ″	o ′ ″	″
March 17	23 46 41 17				
19	23 53 58 48				
20	23 57 37 08				
22	0 4 53 90				
23	0 8 32 19				
24	0 12 10 17				
25	0 15 48 36				
27	0 23 4 19				
31	0 37 36 48				
April 1	0 41 13 97				
2	0 44 52 33				
3	0 48 31 06				
5		NL	83 45 36 88	84 1 37 02	5 50
7		SL	83 32 24 48	83 16 24 89	5 52
10	1 14 4 19	NL	81 53 11 03	82 9 9 81	5 70
13	1 25 4 39	SL	81 19 14 42	81 3 16 45	5 76
14	1 28 45 56	NL	80 25 28 59	80 41 26 29	5 86
15	1 32 26 87	SL	80 35 58 49	80 20 1 06	5 84
16	1 36 8 56				
19		SL	79 11 20 07	78 55 23 70	5·98
20		NL	78 18 43 97	78 34 40 08	6 07
21		SL	78 30 8 71	78 14 12 86	6 05
22		NL	77 37 53 83	77 53 49 43	6 14
24		SL	77 29 45 06	77 13 49 96	6 15
28		SL	76 12 11 61	75 56 17 49	6 28
29	2 24 48 03	NL	75 21 30 27	75 37 24 15	6 36
May 3	2 40 2 80	SL	74 40 27 84	74 24 34 91	6 42
4	2 43 52 33	NL	73 51 8 12	74 7 0 83	6 50
5	2 47 43 30	SL	74 5 35 55	73 49 43 07	6 47
6	2 51 34 68				
7	2 55 26·07				
8	2 59 18 22				
June 15		SL R	66 57 3 75	66 41 17 60	7 06
18		SL	66 50 53 35	66 35 7 41	7 06
19		NL	66 18 0 08	66 33 45 95	7 11
22		NL R	66 16 35 36	66 32 21 07	7 11
23		NL R	66 17 1 98	66 32 47 65	7 11
24	6 10 13 48	SL	66 49 36 25	66 33 50 62	7 06
25		SL	66 50 45 60	66 35 0 01	7 06
26		NL R	66 20 43 39	66 36 28 96	7 10
27		NL R	66 22 43 91	66 38 29 46	7 10
28		SL	66 56 53 55	66 41 8 02	7 05
July 3	6 47 32 06				
14	7 32 35 34				
22	8 4 47·30				
23	8 8 46 18				
28	8 28 32 33				
29	8 32 27 63				

Year and Civil Day	R A of Centre	Lamb observed in NPD	NPD of Lamb	NPD of Centre	Parallax used in the Reductions
1830	h m s		o ′ ″	o ′ ″	″
July 30	8 36 22 59				
Aug. 2	8 48 3 16				
3	8 51 55 42				
4	8 55 47 35				
13	9 30 6 59				
30	10 33 2 97				
Sept 14	11 27 12 85	SL	86 43 37 67	86 27 41 22	5 13
15	11 30 48 42	NL R	86 34 35 73	86 50 32 44	5 15
16	11 34 23 96	SL	87 29 52 38	87 13 55 40	5 04
18	11 41 34 58	NL R	87 44 11 47	88 0 8·98	5 02
19	11 45 10 27				
20	11 48 45 70	SL	89 2 59 03	88 47 0 99	4 86
21	11 52 21 28	NL R	88 54 9 38	89 10 7 68	4 88
22	11 55 57 14	SL	89 49 44 49	89 33 45 92	4 77
23	11 59 32 77	NL R	89 40 57 21	89 56 56 06	4 79
24	12 3 8 51				
25		SL	90 59 50 84	90 43 51 44	4 63
26		NL R	90 51 14 09	91 7 13 77	4 65
28		SL	92 10 12 39	91 54 12 16	4 48
29	12 21 9 91	NL R	92 1 23 82	92 17 24 33	4 50
Oct. 1	12 28 23 88				
5	12 42 55 76	SL	94 53 9 04	94 37 6 88	4 14
6	12 46 34 27	NL	94 44 8 67	95 0 11 11	4 16
8	12 53 53 14	SL	96 2 21 00	95 46 18 00	3 99
11	13 4 54 89	NL	96 38 52 73	96 54 56 56	3 92
12	13 8 36 35	SL R	97 33 35 56	97 17 31 45	3 79
18	13 30 56 50	SL R	99 47 15 95	99 31 10 21	3 50
19	13 34 42 15	NL R	99 36 54 94	99 53 ·0 95	3 52
21	13 42 14 68	SL	100 52 29 34	100 36 22 79	3 35
22	13 46 1 82	SL R	101 13 40 71	100 57 33·89	3 30
28	14 9 0 15	SL	103 18 33 73	103 2 25 34	3 02
29	14 12 52 26	SL R	103 38 29 88	103 22 21 24	2 97
Nov 1	14 24 33 87				
2	14 28 29 14	NL	104 24 23 04	104 40 32 67	2 86
6	14 44 18 43	NL R	105 38 45 10	105 54 55 70	2 69
8		SL	106 46 38 04	106 30 26 97	2 53
10	15 0 21 87	SL R	107 21 11 11	107 4 59 59	2 45
11	15 4 24 77	NL	107 5 45 28	107 21 57 02	2 48
12	15 8 28 74	NL R	107 22 12 97	107 38 24 93	2 44
13	15 12 33 34	SL	108 10 51 68	107 54 39 50	2 33
15	15 20 45 03				
16	15 24 52 46	SL R	108 57 30 15	108 41 17 35	2 21
22	15 49 53 05	NL	109 49 40 55	110 5 54 53	2 09
Dec 13	17 20 44 82	NL R	112 52 49 00	113 9 5 90	1 64
14	17 25 9 82				
15	17 29 36 11				
16		SL	113 35 45 90	113 19 28 73	1 54

Year and Civil Day	R A of Centre	Limb observed in N P D	N P D. of Limb.	N P D of Centre	Parallax used in the Reductions
	h m s		° ′ ″	° ′ ″	″
1830.					
Dec. 17	17 38 28 23	NL R	113 5 36 35	113 21 53 60	1 61
18	17 42 54 45	SL	113 40 21 30	113 24 3 98	1·53
19	17 47 20 70	NL R	113 9 23 19	113 25 40 58	1 60
20	17 51 47 44	SL	113 43 5 62	113 26 48 17	1 52
23		NL R	113 11 4·08	113 27 21 67	1 60
24	18 9 33 96	SL	113 42 49 21	113 26 31 58	1 52
25		NL R	113 8 51 78	113 25 9 45	1 60
26		SL	113 39 47 71	113 23 30 01	1 53
27		NL R	113 4 57 48	113 21 15 20	1 61
28		SL	113 35 1 59	113 18 43 85	1 54
29		NL R	112 59 8 72	113 15 26 48	1 63
30	18 36 11·22	SL	113 28 20 41	113 12 2 63	1 56
1831.					
Jan. 28	20 41 3 29				
31	20 53 23 69		•		
March 7	23 9 4 14	SL R	95 43 57 69	95 27 49 57	4 06
13	23 31 9 61	NL	92 50 57 85	93 7 4 39	4 43
14	23 34 49 48	SL R	92 59 29 80	92 43 23 53	4 41
15	23 38 29 15	NL	92 3 39 60	92 19 45 60	4 52
16	23 42 8·77	SL R	92 12 7 78	91 56 2 05	4 51
17	23 45 47 87	NL	91 16 15 95	91 32 21 42	4 62
21	0 0 22 42	SL R	90 13 35 07	89 57 30 71	4 75
22	0 4 0 72	NL	89 17 49 38	89 33 53 46	4 86
23	0 7 38 80	SL R	89 26 24 63	89 10 20 83	4 84
24	0 11 17·02	NL	88 30 38 02	88 46 41 54	4 96
26	0 18 32 64	SL. R	88 15 32 09	87 59 29 12	4·98
27	0 22 10·55	NL	87 19 59 54	87 36 2 24	5 10
28	0 25 48 37	SL R	87 28 32 27	87 12 29 85	5 08
29	0 29 25 91	NL	86 33 7 43	86 49 9 58	5 19
30	0 33 4 08	SL. R	86 41 43 82	86 25 41 95	5 17

*Right Ascensions and North Polar Distances of the Moon, observed at the
Cape of Good Hope.*

Year and Day	Lımb Observed in R.A	R A of Lımb	R A of Centre at Passage of Lımb	Lımb Observed in NPD	N P D of Lımb	N.P D of Centre at Passage of Centre	Parallax used in the Reductions.
1829		h m s	h m s				
April 11	1 L	7 57 59 83	7 59 1 93				
13	1 L	9 36 33 29	9 37 33 44				
20	2 L	15 18 30 24	15 17 26 97				
24	2 L	19 6 52 24	19 5 45 62				
May 11	1 L	10 6 5 06	10 7 4 98				
12	1 L	10 52 42 56	10 53 42 02				
14	1 L	12 26 17 62	12 27 17 44				
15	1 L	13 14 21 22	13 15 21 85				
June 15	1 L	16 23 12 13	16 24 17 75				
July 9	1 L	13 22 38 44	13 23 38 78				
11	1 L	15 2 51 66	15 3 54 72				
13	1 L	16 54 15 26	16 55 21 61				
Aug. 8	1 L	15 33 18 78	15 34 22 09				
9	1 L	16 27 48 18	16 28 53 12				
11	1 L	18 25 15 27	18 26 22 91				
13	1 L	20 29 40 05	20 30 48 34				
14	1 L	21 31 56 03	21 33 3 93				
14	2 L	21 34 17 14	21 33 9 24				
15	2 L	22 35 31 67	22 34 24 41				
16	2 L	23 35 30 76	23 34 24 13				
Sept 7	1 L	17 58 5 16	17 59 11 40				
9	1 L	19 58 1 97	19 59 9 64				
10	1 L	20 59 25 66	21 0 33 45				
12	1 L	23 1 51 60	23 2 58 89				
13	2 L	0 4 41 57	0 3 34 51				
14	2 L	1 4 45 50	1 3 38 51				
17	2 L	4 3 4 64	4 1 58 17				
Oct 5	1 L	18 34 15 07	18 35 20 99				
6	1 L	19 32 26 21	19 33 32 68				
10	1 L	23 30 2 69	23 31 9 49				
15	2 L	4 35 10 64	4 34 3 44				
Nov. 3	1 L	20 11 5 94	20 12 11 73				
4	1 L	21 8 35 51	21 9 41 28				
5	1 L	22 5 57 26	22 7 2 92				
6	1 L	23 3 19 72	23 4 25 42				
7	1 L	0 1 2 96	0 2 8 92				
9	1 L	1 59 4 97	2 0 11 94				
10	1 L	2 59 46 57	3 0 54 10				
14	2 L	7 3 22 32	7 2 16 89				

Year and Day	Limb Observed in R A	R A of Limb.	R A of Centre at Passage of Limb	Limb Observed in N P D	N P D of Limb	N P D of Centre at Passage of Centre	Parallax used in the Reductions
		h m s	h m s		o ′ ″	o ′ ″	′ ″
1829							
Dec 7	1 L	2 31 50 99	2 32 57 40				
8	1 L	3 31 30 02	3 32 37 07				
9	1 L	4 32 9 13	4 33 16 48				
10	2 L	5 35 16 98	5 34 9 81				
11	2 L	6 35 5 17	6 33 58 79				
1830							
Jan 3	1 L	2 12 6 38	2 13 11 59				
4	1 L	3 9 30 86	3 10 36 66				
5	1 L	4 8 2 25	4 9 8 52				
6	1 L	5 7 18 42	5 8 24 83				
7	1 L	6 6 32 26	6 7 38 34				
8	1 L	7 4 45 71	7 5 50 94				
8	2 L	7 7 1 96	7 5 56 73				
9	2 L	8 3 21 01	8 2 16 98				
10	2 L	8 57 17 03	8 56 14 39				
20	2 L	17 10 52 85	17 9 47 95				
Feb 1	1 L	3 50 8 12	3 51 13 90				
3	1 L	5 46 13 89	5 47 19 55				
4	1 L	6 43 39 47	6 44 44 52				
5	1 L	7 39 45 34	7 40 49 41				
8	2 L	10 18 19 67	10 17 19 16				
9	2 L	11 6 39 69	11 5 40 04				
16	2 L	16 45 31 64	16 44 27 98				
17	2 L	17 40 41 95	17 39 36 95				
Mar. 2	1 L	5 28 48 60	5 29 54 46				
6	1 L	9 8 37·55	9 9 39 31				
7	1 L	9 58 51 10	9 59 51 73				
8	1 L	10 47 25 73	10 48 25 46				
9	2 L	11 36 49 69	11 35 50 55				
10	2 L	12 23 27 55	12 22 28 66				
18	2 L	19 9 38 50	19 8 32 79				
20	2 L	21 6 51 54	21 5 44 96				
31	1 L	7 4 35 82	7 5 40·78				
April 1	1 L	7 59 49 83	8 0 53 42				
2	1 L	8 52 39 83	8 53 42 04				
3	1 L	9 43 15 57	9 44 16 50	NL	78 28 17 08	78 43 13 46	39 21 54
4	1 L	10 31 59 42	10 32 59 34	NL	81 49 38 90	82 4 29 07	36 46 43
5	1 L	11 19 22 50	11 20 21 70	NL	85 29 24 14	85 44 9 71	33 55 63
6	1 L	12 5 ·57 47	12 6 56 33	NL	89 18 19 35	89 33 2 15	30 54 71
7	1 L	12 52 19 72	12 53 18 59	NL. R	93 7 38 41	93 22 19 92	27 48 85
7	2 L	12 54 21 48	12 53 22 61				
8	1 L	13 39 0 82	13 40 0 06				
8	2 L	13 41 3 59	13 40 4 35				
30	1 L	9 26 39 00	9 27 40 77				
May 1	1 L	10 16 19 75	10 17 20 23	NL	80 33 21 98	80 48 17 58	37 53 85
3	1 L	11 50 51 37	11 51 50 37	NL	87 57 46 33	88 12 30 92	32 1 12
4	1 L	12 33 5 16	12 38 4 03	NL	91 49 6 05	92 3 48 54	28 54 47
5	1 L	13 23 30 95	13 24 30 08	NL	95 35 24 72	95 50 7 07	25 48 17
6	1 L	14 10 43·31	14 11 43 04				

Year and Day	Limb Observed in R A	R A of Limb	R A of Centre at Passage of Limb	Limb Observed in N P D	N P D of Limb	N P D of Centre at Passage of Centre.	Parallax used in the Reductions
		h m s	h m s		° ′ ″	° ′ ″	′ ″
1830 July 2	1 L	16 2 54 99	16 3 57 22				
5	1 L	18 47 47 50	18 48 52 57				
6	2 L	19 46 15 92	19 45 10 58				
7	2 L	20 43 34 79	20 42 29 54				
13	2 L	2 19 37 93	2 18 32 39				
14	2 L	3 17 51 30	3 16 44 94				
27	1 L	14 4 33 16	14 5 32 92				
28	1 L	14 52 22 42	14 53 22 94				
30	1 L	16 33 7 75	16 34 10 55				
31	1 L	17 26 41 85	17 27 45 83				
Aug 1	1 L	18 22 19 20	18 23 24 17				
2	1 L	19 19 30 86	19 20 36 45				
3	1 L	20 17 34 61	20 18 40 42				
4	2 L	21 18 1 73	21 16 56 03	NL	103 24 40 48	103 40 38 11	20 40 31
5	2 L	22 15 45 11	22 14 39 70	NL	99 48 17 34	100 4 23 31	24 20 43
12	2 L	4 58 43 58	4 57 36 76				
13	2 L	5 58 39 09	5 57 32 35				
30	1 L	19 49 57 69	19 51 3 36				
31	1 L	20 48 3 83	20 49 9 77				
Sept 1	1 L	21 46 29 56	21 47 35 52				
2	1 L	22 44 52 65	22 45 58 52				
2	2 L	22 47 9 67	22 46 3 80				
3	2 L	23 45 22 45	23 44 16 63				
11	2 L	7 37 53 87	7 36 48 68				
Oct. 1	1 L	0 11 52 27	0 12 58 58	SL	91 3 12 63	90 46 38 06	33 19 60
3	2 L	2 14 14 19	2 13 6 78				
24	1 L	19 56 45 56	19 57 49 80				
25	1 L	20 51 53 91	20 52 58 43	SL	105 20 56·91	105 5 22 46	18 19·05
26	1 L	21 47 33 47	21 48 38 24				
27	1 L	22 43 47 67	22 44 52 75	SL	98 17 53·74	98 1 47·06	25 47 23
28	1 L	23 40 50 98	23 41 56 56				
Nov 1	2 L	3 46 32 08	3 45 23 09				
25	1 L	0 11 20 62	0 12 25 50				
27	1 L	2 7 30 14	2 8 37 22				
29	1 L	4 13 5 70	4 14 15 05				
Dec. 24	1 L	1 42 9 24	1 43 14 61				
26	1 L	3 41 2 14	3 42 10·14				
28	1 L	5 48 53 60	5 50 2 99				
29	1 L	6 53 30 38	6 54 39 28				
29	2 L	6 55 55 04	6 54 46 14				
30	2 L	7 58 43 10	7 57 35 47				

Right Ascensions of Mercury, observed at the Cape of Good Hope.

Year and Day.	R A of Centre.
1829. April 20	h m s 0 54 32 43
21	1 1 2 28
May 13	3 45 40 87
14	3 54 32 63
21	4 55 2 95
25	5 26 47 73
June 15	7 12 38 62

Right Ascensions of Venus, observed at the Cape of Good Hope.

Year and Day	Part Observed in R A	R A of Limb	R A of Centre
1829. April 14	C	h m s	h m s 1 0 24 81
20	C		1 27 52 31
21	C		1 32 28 72
29	C		2 9 45 19
May 1	C		2 19 12 41
1830 Feb. 4	1 L	23 27 4 87	23 27 6 28
5	1 L	23 28 4 08	23 28 5 51
9	1 L	23 30 45·38	23 30 46 91
10	1 L	23 31 5 90	23 31 7 45
15	1 L	23 30 40·85	23 30 42·52

Right Ascensions and North Polar Distances of Mars, observed at the Cape of Good Hope.

Year and Day	Part Observed in R A	R A of Limb	R A of Centre	Part Observed in N P D	N P D of Limb	N P D of Centre	Parallax used in the Reductions.
1830		h m s	h m s		° ′ ″	° ′ ″	″
Sept 18				NL	96 15 39·90	96 15 51 30	10·15
19				SL	96 20 8 39	96 19 57 01	10 11
21				C		96 27 23 74	10 04
22				C		96 30 47 02	10 01
23				C		96 34 1 53	9 97
24				C		96 37 1 59	9 90
30				C		96 49 46 98	9 53
Oct 1	C		23 41 21 50	C		96 50 55 96	9 48
3	C		23 39 35 96	C		96 52 23 59	9 37
4	C		23 38 46 58	C		96 52 41 72	9 29
5	C		23 38 0 25	C		96 52 42 77	9 22
8	C		23 35 52 67	C		96 50 54 66	9 01
9	C		23 35 15 85	C		96 49 41 83	8 94
10	C		23 34 41 45	C		96 48 9 54	8 88
11	C		23 34 9 69	C		96 46 19 39	8 81
12	C		23 33 40 93	C		96 44 11 96	8 75
16	C		23 32 15·16	C		96 32 40 34	8 48
17	C		23 32 1 11	C		96 29 1·48	8 42
18	C		23 31 49 99	C		96 25 6 06	8 35
19	C		23 31 42 22	C		96 20 53 18	8 29
20	C		23 31 37 23	C		96 16 22 80	8 23
21	C		23 31 35 52	C		96 11 35 24	8 17
23	C		23 31 40 57	NL	96 1 0·78	96 1 9 74	8·05
28				SL	95 30 49·48	95 30 40 99	7·75
Nov. 6	1 L	23 37 28 55	23 37 29 06	SL	94 21 16·60	94 21 8·92	7 28
7	1 L	23 38 12 53	23 38 13 04	SL	94 12 34·76	94 12 27 16	7 23
9	1 L	23 39 47 59	23 39 48 08	SL	93 54 29 52	93 54 22·09	7 13
10	1 L	23 40 38 18	23 40 38 67	SL	93 45 7 77	93 45 0 42	7 09
12	1 L	23 42 26 24	23 42 26 72	SL	93 26 0·05	93 25 52 87	7 00
13	1 L	23 43 23 55	23 43 24·02	SL	93 16 12 93	93 16 5 83	6 95
14	1 L	23 44 22 67	23 44 23 14	SL	93 6 14 59	93 6 7 57	6 91
15	1 L	23 45 23 58	23 45 24 04	SL	92 56 9 29	92 56 2 34	6 87
19	1 L	23 49 48 44	23 49 48·88	SL	92 14 3·09	92 13 56 45	6 70
22	1 L	23 53 25 91	23 53 26·34	SL	91 40 59·70	91 40 53·28	6 58

Right Ascensions and North Polar Distances of Jupiter, observed at the Cape of Good Hope.

Year and Day.	Part Observed in R.A.	R A of Centre.	Part Observed in N P.D.	N P D. of Limb	N P D of Centre
1829. June 15 18	C 1 & 2 L	h m s 16 27 51 19 16 26 22 54		o ,, ,, 	o , ,,
July 14 15 16 21	1 & 2 L 1 & 2 L 1 & 2 L 1 & 2 L	16 16 40 83 16 16 27 07 16 16 14·00 16 15 19 29			
Aug. 13 28 1830 Sept 15	1 & 2 L 1 & 2 L	16 15 13·58 16 18 44 89	SL	113 27 52·83	113 27 32 01

Right Ascensions of Saturn, observed at the Cape of Good Hope.

Year and Day	Part Observed in R.A.	R A of Centre.
1829. April 13 1830. Feb 3 4	C C C	h m s 7 59 2·57 9 10 6 75 9 9 47 09

Right Ascensions and North Polar Distances of Uranus, observed at the Cape of Good Hope.

Year and Day	R.A. of Centre	N P D of Centre
1830	h m s	° ′ ″
Oct 5	20 36 36 04	109 16 37 65
8	20 36 29 95	109 16 54 22
9	20 36 28 33	109 16 57 07
10	20 36 27 09	109 17 3 09
11	20 36 28·69	109 17 4 36
12		109 17 5 57
16	20 36 22 82	109 17 7 94
17	20 36 22 83	109 17 5 01
18	20 36 23 12	109 17 3 04
19	20 36 23 61	109 17 0 29
21	20 36 25 11	109 16 50 34
22	20 36 26 26	109 16 44 11
23	20 36 27 63	109 16 37 70

Right Ascensions and North Polar Distances of the Comet of 1830, observed at the Cape of Good Hope.

Year and Day	R A of Centre	N P.D of Centre
1830	h m s	° ′ ″
Mar. 22	22 10 21 33	164 43 0·46
23		160 33 4·11
24	21 42 26 25	156 9 7·06

ERRATUM.

Page 66, first column of stars, *for* 106 Aquarıı *i*¹, *read* 106 Aquarıı *ı*¹.

To the front of this copy of observations is attached a sheet of writing-paper, on which is the following note, in Mr. FALLOWS' hand-writing:—

" The mural circle destined for this Observatory arrived at the Cape about the close of the year 1826, at which time the building itself was only in progress.   My first care was to secure it in a substantial storehouse at Cape Town, till everything was fully prepared for its reception here.   At the end of 1828, the instrument was conveyed from Cape Town to be unpacked in one of the rooms on the eastern wing, by coolies (porters) with the greatest possible care; and as I walked along the road with these people, directing them the whole distance, I can safely assert that no damage whatever could take place at that time.   It is right for me to state that Captain RONALD, the Assistant, who went on board ship to see the mural case raised from the hold to the deck, informed me that, on his arrival at the jetty, where I was preparing everything to be in readiness on landing, some of the tackle gave way, and the case *fell* a short distance.   I am particular in mentioning this circumstance, though apparently of little importance, from the consideration that every justice should be done to Mr. JONES, Charing Cross, the maker of our circle.

" It ought to be borne in mind that the Cape cannot provide intelligent workmen enow to raise so heavy an instrument upon its pier without the utmost caution on the part of the person who directs the operation.   Had it not been for the aid which I received from our *then* Clerk of Works, JOHN SKIRROW, Esq. I hardly know how the business would have been accomplished, though these things are *trifles* in London.   Upon the whole, I am inclined to imagine that it is hardly possible for the mural to have sustained injury at the Cape: however this may be, I am, and have been, unable to bring the readings *taken separately* into accordance; but taken *collectively* the results are as near as one could expect them to be.   The accompanying papers leave no doubt in my mind in this respect.   No fault, I think, can be discovered in the divisions of the circle, the *runs* of each microscope are well adjusted; and yet, if *two* opposite microscopes only be used, the index error is *ever variable* in different parts of the instrument; with *three* microscopes 120° apart, very nearly constant.   I can vouch for the stability of the pier. The fair conclusion then to be drawn from what has been just said seems to

indicate some warp in the axis, which is overcome by the powerful influence of the six microscopes

"Had I been so fortunately situated as to have the advice and assistance of Mr. JONES, I should have been spared much time, much trouble, and no little annoyance.

"FEARON FALLOWS

"*Royal Observatory, Cape of Good Hope,*
7 Nov 1830"

A continuation of the history of this instrument will be found in the *Memoirs of the Royal Astronomical Society*, vol. v (Mr. SHEEPSHANKS), and vol. viii. (Mr. HENDERSON). Mr. SHEEPSHANKS, from a complete set of readings of the six microscopes at every 10° reading of the circle-pointer, deduced the movements of the centre of the circle, and these were found to be so extravagant as to account for a sensible part of the discordances of the microscope readings. Some deductions were drawn from these by myself (in an appendix to Mr. SHEEPSHANKS' paper), and by Mr. HENDERSON, as to the form of the pivot. Still a considerable irregularity remained in the microscope readings, unexplained by any fault of the pivot.

In 1840, this circle was sent to the Royal Observatory of Greenwich (another circle, by Mr. JONES, of the same form and dimensions, and probably equal to any in the world, having been sent to replace it at the Cape), and after some examination of its large pivot, which was evidently deformed, Mr. SIMMS proceeded under my direction to re-turn it, when, to our great astonishment, the steel collar of the pivot was found quite loose, having been attached merely by soft solder. A new collar was mounted in the usual way, by heating-on, and was very carefully turned, and the instrument was adjusted for use. It was not, however, actually used till the summer of 1848 (during an interruption in the use of TROUGHTON's circle), and the details of those observations are given in the *Greenwich Observations*, 1848. From these the reader will see how great are the errors of division, as freed from sensible error in the form of the pivot.

To this account I have only to add that there is not the smallest appearance of mechanical injury to the instrument. And I think it most probable that the first cause of the discreditable state of the divisions is the form of the pivot, by which every division would be affected (the graduations having been made in TROUGHTON's manner, and no opposite divisions having been

examined at the same time for provisional errors).   Mr. HENDERSON and Mr. MACLEAR, as well as Mr. FALLOWS, were perfectly satisfied with the result given by the mean of the six microscopes; and my own use of the instrument has given me the same confidence in its accuracy.

To give an idea of the appearance of the observations, I extract at random the microscope readings for two stars, next to each other in time on the same day, and differing about 61° in position.

	A	B	C	D	E	F
1830, April 7, β Argûs	60 5	61 1	64 1	57 8	34 7	47 8
α Hydræ	85 0	102 6	41 0	33 0	130 5	124 0

In the former of these E is less than D by 23″, and in the latter it is greater by 97″.   The most probable source of accidental error, when the relation of the microscope-readings changes in this manner, is, the reading of some one of the microscopes with an error of 1′.   To detect these, the following examination was instituted · it will easily be seen that it gives materials for discovering errors of a few seconds in any one microscope, and also for discovering small errors in the mean of the six microscopes.

First, it was ascertained from Mr. FALLOWS' notes, that, by occasional adjustments of the microscopes, the observations were divided into the following groups, in each of which the position of the microscopes might be considered invariable, viz. :

<div align="center">

1830,   April   2   to   May   5
(No observations of stars between May 5 and July 3)
July   3   to   Aug.   6
(No observations between Aug 6 and Sept 14)
Sept   14   to   Sept 23
Sept. 24   to   Dec   20
Dec   24   to   Dec   30
(No observations between 1830, Dec 30, and 1831, Jan 25)
1831,   Jan   25   to   Mar 30

</div>

In each of these groups, the stars were placed in the order of their pointer-readings (the reflexion-observations of any star being considered as belonging to another star in the reflexion-position), and the days of observation of each star were collected.   Mr. FALLOWS had taken the mean of the six microscopes for each observation.   It was easy, therefore, to place, opposite to each day of observation, the difference between each microscope and

the mean of the six; a difference which, while the position of the microscopes is unvaried, ought to be constant for each star, and ought to vary from star to star (for the same microscope) as a function of the pointer-reading. Any departure from these laws was immediately caught by the eye. The observations of the sun, &c., were treated in the same manner, (excepting those between June 15 and June 28, of which only the mean of microscopes is given), it being understood only, that as its pointer-reading varied from day to day, the differences would slowly change. In this manner several errors in readings of microscopes and in means, which had escaped Mr. FALLOWS, were detected.

The next step was to form zenith-points. It was Mr. FALLOWS' practice to observe on one day a certain number of stars by reflexion, on the next day to observe the same stars directly with other stars; on a third day to observe some of the preceding day's stars, and, also other stars, by reflexion, and so on. This process, presuming on the firmness of the pier and microscopes (which appear in this instrument worthy of every confidence), is admirably adapted to give accurate zenith-points. But as the star's apparent place and its refraction are different on different days, it is necessary so to shape the process that due account may be taken of these changes The process, therefore, was this ·—First, an approximate zenith-point was found, and from the star's approximate zenith-distance, and the barometer and thermometer readings given by Mr. FALLOWS, the refraction was computed by BESSEL's Tables. These refractions were applied to the circle readings, a process which required much care, as the sign changed at the zenith, the nadir, and the north and south horizons. Then the star-reductions were computed by BESSEL's log A, log B, log C, log D, and the log c', log d', log a', log b', of the Royal Astronomical Society's Catalogue, or by the equivalent formulæ. These star-corrections were applied to the circle-readings, with changed sign for direct observations, and with unchanged sign for reflexion-observations (the circle-readings increasing from the south horizon through the zenith to the north), and thus the circle-readings were obtained which would have been found from observation if the stars had been invariable in place and unaffected by refraction. Then by comparing a corrected direct circle-reading, for a star on one day, with a corrected reflexion circle-reading for the same star on another day, a zenith-point was found. These zenith points were found to be exceedingly accordant for the different stars, and so

steady from day to day that there was no difficulty in adopting one mean zenith-point through the whole duration of each of the groups which I have mentioned (using Sept. 24 to Dec 30 as one group). By application of this zenith-point to the corrected circle-reading, a corrected zenith-distance would be found, corresponding to the star's mean place at the beginning of the year, unaffected by refraction. But it was thought better to combine the zenith-point with the colatitude of the place, and the application of the quantity so formed gave at once a mean north polar distance of the star. The mean north polar distances for 1831 were afterwards reduced to 1830 by application of one year's precession, the same quantity as that given in the Catalogue hereafter to be described. The colatitude employed was Mr. HENDERSON's, namely, 56° 3′ 56″·75 (*Mem. Roy. Ast. Soc* vol x p. 77); that obtained from several of Mr. FALLOWS' observations of β *Hydri* above and below the pole is not sensibly different. The results of a few observations which appear to be erroneous, are included in brackets; they are not used in the formation of the Catalogue.

The only stars which, from their proximity to the horizon, can be used for correction of refraction, are β *Hydri* S. P. and γ *Draconis.* The observations, reduced only for zenith point, are as follows :—

Star's Name	Day of Observation	Uncorrected Zenith Distance	Barometer	Thermometer Ext	Int	Refraction computed by BESSEL'S Tables
β Hydri S P	1830, July 3	67° 49′ 18″·10	in 30 14	51° 9	57° 5	2′ 22″·12
	6	15 60	30 47	51 0	·55 4	2 23 94
	7	17 15	30 25	52 8	56 2	2 22 37
	8	19 67	30 14	59 3	57 5	2 19·99
	9	19 32	30 05	53 8	57 8	2 21 14
γ Draconis	1830, July 29	85 16 40 75	30 53	46 8	53 6	10 35·65
	30	40 75	30 52	50 8	54 5	10 29 77
	31	58 60	30 32	53 8	55·9	10 21 96
	Aug 2	45 82	30 33	49 0	57 6	10 28 28
	3	57 43	30 23	55 0	57·6	10 18 32
	4	57 32	30 10	55 0	57 6	10 15 63

It is necessary to state that there is no determination of zenith point

between May 5 and July 28, and no notice of change of microscopes. The observations of β *Hydri*, both above and below the pole, as well as the observations of the sun in the same interval, are reduced with the zenith point 90° 0' 35" 80, which is given by the observations commencing July 28. The zenith point up to May 5 is 90° 0' 41"·11.

For the sun, moon, and planets, the same general process was used, the parallax being subtracted (numerically) from the circle-readings for direct observations, and added for reflexion-observations. The methods and authorities for computing these parallaxes will be described hereafter.

Catalogue of Concluded Mean Right Ascensions and North Polar Distances of Stars.

I will explain the columns of the Catalogue in order.

The *first* column contains merely a series of Nos. for facility of reference.

The *second* column contains the star's name. One of the following names has been adopted in the order of preference:—

(1.) FLAMSTEED's constellation and No. and BAYER's letter.

(2) LACAILLE's constellation and Greek letter, with the addition of any modification of the name in the Catalogues of the British Association.

(3.) The No. in the General Catalogue of the British Association.

(4.) PIAZZI's Hour and No.

(5.) WEISSE's Hour and No.

(6.) The No. in LALANDE's Catalogue, published by the British Association.

(7.) The star's North Polar Distance.

The six stars of the last class were defined by Mr. FALLOWS in the following way:—

No. 78. " 3° 43' Z.D." It appeared from a computation of the intervals of wires that the zenith-distance must be supposed to be south, although in every other instance it is measured to the north.

No. 82. Z.D. given as 49° 6', 49° 7', 49° 9'. The intervals of wires shew that it was north.

No. 86. " Z.D. 49° 25', taken for 89 *Tauri*."

No. 123. " In the way of E' *Orionis*."

No. 142. " Z.D 52° 29', set for the moon."

No. 236. " Instead of *ı Centauri.*"

The *third* column contains the number of observations of each star in right ascension.

The *fourth* column is formed by converting each day of observation into an equivalent fraction of year, reckoning from Jan. 1, and taking the mean of all.

The *fifth* column is the mean of all the results for mean right ascension, 1830, January 1.

The *sixth* column contains the annual variation in R A , thus formed .—

For all stars included in the Catalogue of the Royal Astronomical Society the annual variations are copied (some containing proper motions and others being simple geometrical precession) without any alteration, except in the instance of No. 249, *Centauri* α^2, as is mentioned in the note.

For all other stars (24 in number) the precessions are computed by the formula $+ 3^{s}\cdot 068 + 1^{s}\cdot 3362$ sin R.A. cotan N.P.D   The N.P.D. of the two stars nearest to the south pole, *σ Octantis* and B.A.C. 7020, have been first carefully computed for 1830

The *seventh* and *eighth* columns contain the numbers of observations with the mural circle, distinguished as direct or by reflexion.

The *ninth* and *tenth* columns contain the means of all the results for N.P.D. 1830, Jan. 1, distinguished in the same way.

The *eleventh, twelfth,* and *thirteenth* columns correspond exactly in N.P D. to the *third, fourth,* and *fifth* in R.A.

A reflexion-observation is supposed as accurate as a direct observation. For *β Hydri* below the pole the weight $\frac{4}{5}$ is given to each observation in combination with those above the pole

The *fourteenth* column contains the annual variation in N.P.D.   For all stars included in the Catalogue of the Royal Astronomical Society the annual variations are copied without alteration, except in the instance of No. 249, α^2 *Centauri,* as is mentioned in the note.   For the two remaining stars (Weisse, x. 987 and B.A.C. 7020), it is computed by the formula $- 20''\cdot 043$ cos R.A.

Right Ascensions and North Polar Distances of the Sun, Moon, and Planets,
and of the Comet of 1830.

The right ascension of the sun's centre is in every instance found from the mean of the transits of the two limbs, except on 1830, Nov. 22, when the 2 L only was observed. The time of semidiameter passing is taken from the Berlin Ephemeris.

The north polar distance of the sun's centre is formed by the following steps :—First, the N.P.D. corrected for refraction is formed as for the stars. Second, the parallax is computed with the approximate Z.D. diminished by 10′ 37″ for angle of the centre, and with the ar. complement log. distance of the Bologna Ephemeris increased by 0·9329 (which constant includes the effect of the sun's mean horizontal equatorial parallax 8″·57 and the geocentric radius of the Cape of Good Hope for compression $\frac{1}{300}$). Third, after the application of parallax, the semidiameter of the Berlin Ephemeris is applied.

The right ascension of the moon's limb is formed as for a star. The difference of right ascension of the moon's limb and moon's centre is thus investigated :— The Berlin mean solar time of the moon's passage at the Cape of Good Hope is found by subtracting from the Berlin mean time of the passage at Berlin a quantity varying from $20^{m}·9$ (when the moon's increase of time of transit in one day is 42^{m}) to $21^{m}·2$ (when the increase is 64^{m}). With this time the semidiameter in arc is interpolated from the Berlin Ephemeris, with second differences. For 1829 the moon's declination is also interpolated in the same manner ; for 1830 it is taken from the declination at transit at Berlin, with application of a small correction for the difference of longitude. The difference of R.A. is then computed by the formula $\frac{\text{moon's semidiameter}}{15 \times \text{cosine declination}}$; and this quantity is applied to form the R.A. of moon's centre at passage of limb.

On 1829, August 14, and 1830, January 8 and April 7, the corrections $+0^{s}·01$, $+0^{s}·09$, and $+0^{s}·07$, are applied to the 2 L ; and on 1830, April 8 and Dec 29, the corrections $-0^{s}·55$ and $-0^{s}·24$ are applied to the 1 L, for defect of illumination. These numbers are computed as in the *Greenwich Observations* and *Lunar Reductions.*

On 1830, Sept. 2, the moon was observed during the obscuration of a total eclipse.

The N.P.D. of the moon's limb is found by correcting the circle-reading for refraction, forming an approximate corrected apparent zenith-distance; and then (with horizontal equatorial parallax interpolated with second differences from the Berlin Ephemeris) computing the approximate parallax by the formula, log. seconds of approximate parallax = log. sec. of hor. eq. par. + 9·999512 + log. sin (Z.D. − 10′ 37″), and applying a very small correction peculiar to the moon's limb (see the *Lunar Reductions*); and with this parallax, and the polar point of the circle, forming the N.P.D. of limb   Then the semidiameter, found as previously described, is applied to form the N.P.D. of centre.

The circle-observation of the moon, which is here ascribed to October 25, was in the observation-book dated October 24   It was found necessary to alter the day, and also to diminish the pointer-reading (direct observation) by 10°.

The log. semidiameters of *Venus* in R.A. are computed by the formula, 9·7404 + ar. co. log. distance + log. secant declination.   The log. distance is taken from the Bologna Ephemeris.

The log. semidiameters of *Mars* in R.A. are computed by the same formula, with the constant 9·4713.

The parallax of *Mars* is computed by the formula, log. parallax = log. sine (Zen. Dist. − 10′ 37″) + ar. co. log. distance + 0·9329   The log. distance is taken from the Bologna Ephemeris.   The log. semidiameter in N P.D. = 0·6474 + ar. co. log. distance.

On October 8 there is the remark, "too high above centre wire 2″ or 3″." On Sept. 18 and October 23 the limb is changed from S. to N., and on Sept. 19 and Nov. 22 it is changed from N. to S.

In the transit of *Jupiter*, 1829, August 13, the 1 L is marked as observed on the 2, 3, 4 wires, and the 2 L on the 4, 5, 6 wires, but it was found necessary to reduce the 5 and 6 wires as belonging to the 1 L.   In the circle observation of 1830, Sept. 15, the N.L is changed to S.L., and the circle-reading (observation direct) is diminished 1′.   The log. distance for parallax and semidiameter is taken from the Bologna Ephemeris; the constant for semidiameter is 1·9987.

For *Uranus* the log. distance is taken from the Bologna Ephemeris.

The N.P D. of the comet of 1830 is given as computed by Mr. FALLOWS from observations corrected by index-errors found from *α Orionis* and *α Hydræ*. Refraction is applied, but not parallax. Some particulars of this comet will be found in the *Astronomische Nachrichten*, No 183, vol. viii. p. 300.

In addition to the observations of which the reduction is here given, Mr. FALLOWS' books contain some observations of the comet of 1830, made with an altitude and azimuth instrument, and some measures of the distance of the cusps in the solar eclipse of 1830. I have not attempted to reduce these, as several explanations which appear essential to the certainty of the reductions are omitted.

The latitude of the Royal Observatory of the Cape of Good Hope is 33° 56′ 3″·25 south (HENDERSON, *Mem. Royal Astronomical Society*, vol x p. 77), and its longitude 1ʰ 13ᵐ 55ˢ east of the meridian of Greenwich (HENDERSON, *Mem. Royal Astronomical Society*, vol. viii. p. 137).

ROYAL OBSERVATORY, CAPE OF GOOD HOPE.

MEAN RIGHT ASCENSIONS OF STARS

For 1830, January 1,

DEDUCED FROM EACH DAY'S OBSERVATION,

IN THE YEARS

1829, 1830, AND 1831.

{ Piazzi XXIII—282 } { B. A C 5 }

	h	m	s
1830 Nov. 25	o	o	o 72

Phœnicis ε

1829	h	m	s
Aug 26	o	o	45 49
27			45 50
28			45 45
Sept 3			45 75
14			45 19
17			45 42
Oct. 19			45 29
20			45 45
22			45 65
23			45 46
26			45 60
27			45 58
30			45 54
Nov. 2			45 49
4			45 53
19			45 42

8 Ceti ι

1829.	h	m	s
Aug 27	o	10	45 90
Sept. 14			45·69
17			45·94
Oct. 20			45 92
23			45 88
26			45 94
27			46·06
30			45 81
Nov. 2			45 94
3			46 00
16			45 93
19			45 70

{ Piazzi 0—60 } { B A C 81 }

1829.	h	m	s
Oct. 10	o	15	48 72

Hydri β

1829		h	m	s
April 11	SP	o 16	40	16
11			40	13
12	SP		40	50
12			40	44
13	SP		40	02
14	SP		40	71
14			40	46
15			42	37
16	SP		40	04
16			39	96
20	SP		39	85
20			40	28
21	SP		40	02
21			40	12
22			39	66
23	SP		39	90
24	SP		39	75
25			40	06
29	SP		40	51
29			40	27
30			40	05
May 1	SP		40	26
1			39	86
2			39·46	
3			39	35
5	SP		40	16
5			39	95
7	SP		40	19
7			40	25
8	SP		40	42
8			40	08
10			40	15
11	SP		40	05
12	SP		40	28
12			40	12
13	SP		40	13
13			40	07
14	SP		40	36
14			40	07
15	SP		40	11
15			40	01
17			40	05
18			39	73
20			40	07
24			39	90
25	SP		39	79
June 15	SP		42	21
18	SP		42	02
July 3	SP		39	74
3			40	46
6	SP		39	53

Hydri β, *continued*

1829		h	m	s
July 6		o 16	39	81
8	SP		40	10
8			40	03
9	SP		39	95
Aug. 3	SP		37	05
3			42	86
14			40	19
15	SP		40	72
16			41	26
26			40	71
27			40	59
28	SP		40	52
28			40	67
Sept 2	SP		40	55
2			40	69
3	SP		40	83
3			40	81
6			40	65
7	SP		40	35
7			40	61
12	SP		40	36
12			40	86
13	SP		40	31
13			40	72
Oct 19			40	28
20			39	98
21			39	77
22			39	92
26			40	57
Nov 6	SP		40	92
16			39	90
19			39	80
20			40	14
23	SP		41	11
24			40	15
25			40	03
26			40	26
27			40	02
28	SP		40	97
Dec 21			40	51
22	SP		40	48
24			40	48
24	SP		40	64
1830. May 4	SP		41	56
5			40	04
5			41	82

Hydri β, *continued*

1830	h	m	s
Dec 1	o 16	39	85
5		40	26

Phœnicis α

1829	h	m	s
Sept 17	o 17	51	62
Oct 30		51	79
Nov 2		51	77
3		51	76

12 Ceti

1830.	h	m	s
Oct 3	o 21	21	87
5		21	93
8		21	85
10		22	12
11		21	98
12		21	94
16		21	93
17		21	91
18		21	99
19		21	94
20		21	91
21		21	89
23		22	03
28		21	82
Nov. 6		21	96
7		21	98
9		22	10
10		21	99
12		22	03
13		21	96
14		21	99
19		21	90

Phœnicis λ

1829	h	m	s
Nov 2	o 23	11	64
3		11	54

Toucanæ β¹		20 Ceti		Phœnicis β		45 Ceti θ, *continued*	
1829 Sept 17	h m s 0 23 42 44	1829 Aug 28	h m s 0 44 19 26	1829 Aug 26	h m s 0 58 28 77	1829 Nov 16	h m s 1 15 31 55
Oct 30	42 69	Sept 7	19 30	28	28 83	17	31 69
		17	19 43			19	31 63
{ Weisse O—467 } { Lalande 856 }		Oct 22	19 56	Sept 7	28 77	20	31 61
		26	19 21	17	28 68	21	31 73
1829 Sept 13	0 26 14 33	27	19 56	Oct 22	28 92	26	31 74
		Nov 16	19 42	26	28 64	27	31 94
14 Ceti.		19	19 46	27	29 08	28	31 75
		20	19 38				
1830 Oct 1	0 26 49 62	21	19 37	Nov 16	29 02	Dec 3	31 58
		24	19 43	17	28 96	4	31 52
		25	19 68	19	28 73	8	31 85
{ Piazzi O—131 } { B A C 161 }		26	19 60	20	28 96	11	31 75
				21	28 84	14	31 81
1829 Sept 14	0 28 45 33	Dec 4	19 39	25	29 09		
		8	19 44	26	28 94	1830 Dec 5	31 68
		9	19 44			6	31 69
16 Ceti β		11	19 42	Dec 3	28 54		
				4	28 66		
1829 Aug 16	0 35 3 15	1830 Oct 1	19 57	8	28 97	{ Piazzi I—85 } { B A C 440 }	
26	2 96			11	28 92		
28	2 95					1829 Nov 9	1 19 28 49
		Sculptoris α.		Phœnicis ζ			
Sept. 7	2 98						
17	3 17			1829 Nov 21	1 1 13 23	Phœnicis γ	
		1829 Aug 28	0 50 24 24	26	13 17		
Oct 27	3 15					1829 Aug 26	1 20 58 44
		Sept 7	24·32	Dec 3	13·11	28	58 23
Nov 16	3 35	17	24 45	4	13 00		
19	2 94			8	13 02	Sept 7	58 21
20	3 23	Oct 22	24 55	11	13 08	17	58 14
24	3 24	26	24 18				
25	3 41	27	24 63	89 Piscium f		Oct 26	58 03
26	3 23					27	58 12
		Nov 16	24 18	1829 Sept 14	1 9 1·77		
Dec. 4	3 18	17	24 38			Nov 19	58 13
8	3 14	19	24 04			20	58 36
11	2 88	20	24·52	45 Ceti θ.		21	58 40
		21	24 40			25	58 45
63 Piscium.		25	24 68	1829 Aug 16	1 15 31 75	26	58 39
		26	24 56	26	31 61	27	58 51
1829 Sept. 13	0 39 52 10			28	31 59	28	58 42
14	51 94	Dec 3	24 26				
		4	24 36	Sept 7	31 50	Dec 3	58 30
		8	24 41	17	31 39	4	58 14
		11	24 37			8	58 30
		12	24 48	Oct 26	31 56	11	58 28
				27	31 72	14	58 12

11 Eridani τ³, continued

1829	h m s
Nov 19	2 54 53 69
20	53 58
21	53 74
25	54 10
26	53 82
27	53 98
Dec 3	53 78
4	53 79
11	54 03
22	53 82
24	53 87

{ Piazzi III—4 }
{ B A C 987 }

1830	
Jan 4	3 2 2 43

12 Eridani

1829	h m s
Nov 25	3 4 51 30
27	51 18
Dec. 3	50 97
4	51 02
8	51 11
11	51 00
21	51 39
22	51 13
24	50 99

16 Eridani τ⁴

1829	h m s
Sept 17	3 11 57 37
Oct 27	57 20
Nov 16	57 24
19	57 22
20	57 16
21	57 31
25	57 48
26	57 39
27	57 63
Dec 3	57 39

16 Eridani τ⁴, continued

1829	h m s
Dec 4	3 11 57 38
8	57 48
11	57 44
21	57 45
22	57 35
24	57 41
26	57 41
1830	
Dec 23	57 43
24	57 40

5 Tauri f

1829	h m s
Dec. 8	3 21 29 99

17 Eridani

1829	h m s
Oct 26	3 22 11 09
27	11 22
Nov 19	11 03
20	11 03
21	11 15
25	11 27
26	11 23
27	11 52
Dec 3	11 26
4	11 32
11	11 36
21	11 24
22	11 25
24	11 30
26	11 26
28	11 28

19 Eridani τ⁵

1829	h m s
Sept 17	3 26 16 87
Oct 26	16 74
27	17 00
Nov 16	16 73
19	16 67

19 Eridani τ⁵, continued

1829	h m s
Nov 20	3 26 16 72
21	16 83
25	16 85
26	16 79
27	16 92
Dec 3	16 90
4	16 84
11	16 95
21	16 94
22	16 84
24	16 82
26	16 89
28	16 83

{ Piazzi III—103 }
{ B A C. 1119 }

1830.	
Nov 1	3 29 49 73

{ Piazzi III—113 }
{ B A C 1125 }

1829	
Dec 21	3 30 59 74
22	59 57
24	59 72
26	59 73
28	59 70

23 Eridani δ

1829	
Sept 17	3 35 6 47
Oct. 26	6 15
Nov 16	6 35
19	6 41
20	6 33
21	6 39
25	6 43
26	6 48
27	6 56
Dec. 3	6 60
4	6 59

23 Eridani δ, continued

1829	h m s
Dec 11	3 35 6 47
21	6 55
22	6 52
24	6 60
1830	
Dec 13	6 85
15	6 55
16	6 52
18	6 51

30 Tauri e

1830	
Nov 1	3 38 57 62

27 Eridani τ⁶

1829	
Sept 17	3 39 32 05
Oct 26	31 98
27	32 10
Nov 16	32 05
19	31 93
20	31 96
21	32 05
25	32 24
26	32 18
27	32 21
Dec. 3	32 10
4	32 14
11	32 21
24	32 18
26	32 13
28	32 15
1830	
Dec 23	32 15
24	32 26

Piazzi III—183

1829	
Dec 22	3 42 19 48
28	19 54

{ Piazzi III—187 / B A C 1206 }

1829	h m s
Dec 8	3 43 27 62

32 Eridani

1829.	h m s
Sept 17	3 45 45 30
Oct 26	45 26
27	45 51
Nov 19	45 35
20	45 36
21	45 55
25	45 42
26	45 51
27	45 52
Dec 3	45 62
4	45 53
11	45 46
22	45 55
24	45 54
26	45 51
28	45 68

Hydri γ

1829	h m s
Dec. 11	3 49 57 83

34 Eridani γ

1829	h m s
Sept 17	3 50 6 00
Oct 26	5 77
27	6 08
Nov 16	5 92
19	5 86
20	5 85
21	5 95
25	5 98
26	6 05
Dec. 3	5 94
4	6 15
8	6 07
9	6 03
10	6 10
26	6 07

35 Tauri λ

1830	h m s
Jan 5	3 51 16 16

35 Eridani

1829	h m s
Dec 22	3 52 55 50

Reticuli δ

1829	h m s
Nov 26	3 56 3 82
27	4 17
Dec. 3	4 45
8	4 13
11	4 03
22	4 44
26	4 10

{ Piazzi III—249 / B A C 1272 }

1830	h m s
Jan. 5	3 58 15 70

37 Eridani

1830	h m s
Dec 15	4 2 5·19

38 Eridani o¹.

1829	h m s
Oct 26	4 3 34 03
27	34 28
Nov 16	34·16
19	34 23
20	34 18
25	34 26
26	34 23
27	34 28
Dec 3	34 35
4	34 28
8	34 34
9	34 16
10	34 27

38 Eridani o¹, *continued*

1829	h m s
Dec 11	4 3 34 32
22	34 24
24	34 37
28	34 30
1830	
Dec 13	34 14
15	34 34
16	34 35
18	34 07
20	34 33

48 Tauri

1830	h m s
Dec 26	4 6 7 73

Horologii α.

1829	h m s
Dec 3	4 8 22 21
11	22 31
22	22 22
24	22 30
26	22 28
28	22 27

✱ N P D 127° 39'

1829	h m s
Nov. 16	4 9 3 64

54 Tauri γ

1829	h m s
Dec 8	4 10 7 71
9	7 70
1830.	
Aug 12	7 54

Reticuli α

1829	h m s
Nov. 27	4 12 14 95
Dec 3	15 06

Reticuli α, *continued*

1829	h m s
Dec 22	4 12 15 19
24	15 29
26	15 31
28	15 16

43 Eridani v⁵

1829	h m s
Nov 16	4 17 39 01
20	38 78
25	39 22
26	38 97
27	39 08
Dec. 3	39 04
8	39 12
11	39 16
22	39 25
24	39 24
26	39 23

✱ N P D 74° 50'

1830	h m s
Jan 8	4 17 55 23
9	55 40
11	55 25

78 Tauri θ²

1830	h m s
Jan 5	4 18 57 94

Reticuli η.

1831	h m s
Jan 25	4 20 3 91

Cæli δ

1829	h m s
Nov 16	4 25 37 59
20	37 67
26	37·91
27	37 67
Dec 3	37 81
8	37 87

Cæli δ, continued

1829	h m s
Dec 11	4 25 38 01
22	38 10
24	37 83
26	37 94
28	37 94

* N P D 74° 31'

1830	
Nov 29	4 25 57 59

87 Tauri α

1829	
Sept 17	4 26 10 33
Dec 9	10 46
1830	
Jan 5	10 30
6	10 27
Aug 12	10 20
13	10 15

52 Eridani υ⁷

1829	
Oct 27	4 28 56 83
Dec 28	56 64

Doradûs α

1829	
Nov 16	4 30 19 22
20	19 40
26	19 51
27	19 48
Dec. 3	19 56
8	19 64
11	19 84
22	19 77
24	19 84
26	19 84

Cæli α

1829	h m s
Nov 20	4 35 5 00
25	5 36
26	5 19
27	5 12
Dec 3	5 14
8	5 35
11	5 30
22	5 27
24	5 42
26	5 33
28	5 27
1831	
Jan 25	5 13
26	5 28
27	5 15
31	5 19
Feb 1	5 14
2	5 03
3	5 19

96 Tauri

1829	
Dec 9	4 40 1 01

61 Eridani ω

1829	
Oct 27	4 44 32 68
Nov 20	32 58
25	32 81
26	32 70
27	32 51
Dec 3	32 77
8	32 74
11	32 57
22	32 72
24	32 71
26	32 73
28	32 71
1830	
Dec 13	32 50
15	32 79
18	32 67
20	32 67

63 Eridani

1829	h m s
Oct 27	4 51 47 91
Nov 16	47 61
20	47 50
25	47 47
26	47 78
27	47 71
Dec 3	47 76
8	47 95
11	48 08
22	47 76
24	47 86
26	47 88
28	47 85
1830	
Dec 23	47 83

104 Tauri m

1830	
Jan 6	4 57 24 43

67 Eridani β

1829	
Oct 27	4 59 29 71
Nov 20	29 46
25	29 79
26	29 61
27	29 79
Dec 3	29 79
8	29 60
11	29 72
22	29 69
24	29 80
26	29 70
28	29 74
1830	
Aug. 11	29·72
1831	
Feb. 5	29 83
13	29 90

15 Orionis

1829	h m s
Dec 9	4 59 58 44
10	58 57

B A C 1592

1831	
Jan 27	5 0 11 89

69 Eridani λ

1831	
Jan 26	5 1 0 88
Feb 3	0 97

19 Orionis β

1829	
April 17	5 6 22 32
20	22 39
21	22 23
30	22 38
May 2	22·34
11	22 05
12	22 19
13	22 35
14	22 23
15	22 20
18	22 33
21	22 27
July 6	22 26
10	22 30
12	22 27
14	22 23
15	22 25
16	22 20
21	22 26
22	22 30
Oct. 27	22 27
Nov 20	22 13
25	22 28
26	22 07
27	22 20
Dec 3	22 24

19 Orionis β, *continued*		6 Leporis λ		34 Orionis δ		11 Leporis α	
1829	h m s	1829	h m s	1829	h m s	1829	h m s
Dec 8	5 6 22 23	Dec 24	5 11 44 66	April 17	5 23 19 60	Sept 17	5 25 14 21
9	22 38	26	44 65	20	19 38	26	14 02
11	22 21	28	44 74	22	19 07		
22	22 22					Nov 26	13 91
24	22 26			May 2	19 29		
26	22 18	**28 Orionis η**		12	19 45	Dec 3	14 00
28	22 20			13	19 52	8	14 04
				18	19 37	9	14 02
1830.		1829		21	19 36	11	14 04
Feb. 22	22 12	July 6	5 15 55 81	22	19 37	22	13 94
23	22 00	10	55 93	25	19 41	26	13 97
24	22 25	12	55 90			28	14 04
25	21 96			July 6	19 37		
26	21 99	Sept 14	56 01	10	19 45	1830	
				12	19 36	Feb 4	14 09
Mar 9	22 26	Oct 27	55 90	14	19 41		
10	22 22			15	19 39	1831	
11	22 28	Nov 25	55 98	16	19 37	Feb 5	14 01
13	22 21	26	55 90	21	19 38	13	14 08
15	22 24			22	19 36		
16	22 23	Dec 3	55 87	23	19 47		
17	22 14	8	55 86	24	19 44	**122 Tauri**	
18	22 19	11	56 23	26	19 51		
19	22 24					1830	
20	22 28			Oct 27	19 44	Jan 6	5 27 11 97
25	22 27						
27	22 21	**117 Tauri.**		Nov 20	19 27	Feb 3	12 14
				25	19 45		
Aug 11	22 34	1830		27	19 54	Dec 28	11 95
12	22 28	Jan 6	5 18 9 88				
13	22 22			1830			
				Feb 22	19 50	**123 Tauri ζ**	
				23	19 43		
20 Orionis τ		**9 Leporis β.**		24	19 51	1829	
				25	19 38	Dec. 10	5 27 29 27
1829		1829		26	19 39		
Oct 27	5 9 21 12	Sept 14	5 20 57 64			**46 Orionis ι.**	
		17	57 95	Mar 9	19 45		
Nov 20	21 12			10	19 41	1829	
25	21 28	Nov 20	57 41	11	19 44	April 17	5 27 35 35
26	21 08	25	57 65	13	19 52	20	35 43
27	21 30	26	57 54	15	19 38	21	35 39
		27	57 59	16	19 46	30	35 40
Dec 3	21 27			17	19·49		
8	21 26	Dec 3	57 49	18	19 51	May 2	35 44
11	21 41	8	58 04	19	19 46	11	35 37
24	21 28	11	57 95	20	19 43	12	35 31
		26	57 79	22	19 38	13	35 26
1830		28	57 76	25	19 38	14	35 41
Dec 15	21·39			27	19 48	18	35·45
16	21 26	1830				19	35 33
20	21·30	Feb 4	57 88	Dec. 23	19 42	21	35 34
				24	19 41	22	35 39

46 Orionis s, *continued*

1829	h m s
July 12	5 27 35 35
13	35 40
14	35 43
15	35 30
16	35 46
21	35 39
22	35 30
23	35 23
24	35 31
26	35 39
27	35 38
Oct 27	35 38
Nov 20	35 07
25	35 36
27	35 30

48 Orionis σ

1829	
Oct 27	5 30 12 91
Nov 26	12 79
Dec 3	12 88
22	12 88
26	12 82
28	12 93

126 Tauri

1830	
Feb 3	5 31 28 46
Dec 28	28 42

50 Orionis ζ

1829	
April 17	5 32 10 90
20	10 98
21	11 07
30	10 94
May 2	10 97
11	10 98
12	10 78
13	10 95
14	10 88
18	10 92
19	10 93

50 Orionis ζ, *continued*

1829.	h m s
May 21	5 32 10 85
22	10 96
25	11 01
July 6	10 84
10	11 03
12	10 88
13	10 99
14	10 99
15	10 91
16	10 89
21	10 89
22	10 97
23	10 96
24	11 04
26	11 16
27	11 11
Nov 20	10 77
1830	
Mai 9	10 98
10	11 00
13	10 99
15	11 08
16	11 02
17	10 95
18	11 03
19	11 01
20	10 93
22	10 87
23	11 04
25	11 08
27	11 00

Columbæ α

1829	
Sept 14	5 33 29 57
17	29 73
21	29 57
24	29 18
26	29 63
Nov 25	29 55
26	29 55
27	29 45
Dec 3	29 54
8	29 48
11	29 58
22	29 75
26	29 69
28	29 68

Columbæ α, *continued*

1830	h m s
Feb 4	5 33 29 67
22	29 53
23	29 39
24	29 51
25	29 38
26	29 41
1831	
Feb 17	29 51

130 Tauri

1830	
Feb 3	5 37 31 75
Dec 28	31 28

Columbæ μ

1829	
Sept 17	5 39 41 11
21	40 95
26	40 86
Nov 25	40 89
Dec 3	41 02
11	40 91
28	40 88
1830	
Feb 4	41 05

53 Orionis x

1829	
April 17	5 39 41 74
20	41 64
May 2	41 73
11	41 76
12	41 55
13	41 65
14	41 79
18	41 56
19	41 87
21	41 72
22	41 78
25	41 69
July 6	41 61

53 Orionis x, *continued*

1829	h m s
July 21	5 39 41 78
22	41 65
23	41 64
24	41 63
26	41 74
27	41 74
Sept 14	41 66
Oct 27	41 46
Nov 20	41 35
26	41 52
1830	
Mai 9	41 62
10	41 80
13	41 75
15	41 73
16	41 61
17	41 73
18	41 81
19	41 82
20	41 69
23	41 63
25	41 69
27	41 83

Doradûs δ

1831	
Jan 25	5 44 28 23

Columbæ β

1829	
Nov 26	5 44 58 11
1830	
Feb 4	58·16
1831	
Feb 1	58 22
3	58 15
4	57 91

58 Orionis α

1829	h m s
April 11	5 45 58 37
13	58 13

58 Orionis α, continued

1829	h m s
April 15	5 45 58 03
17	58 28
20	58 10
21	58 07
27	58 21
30	58 36
May 1	58 32
2	58 16
11	58 19
12	58 16
13	58 09
14	58 11
18	58 17
19	58 19
21	58 16
22	58 12
July 6	58 08
13	58 26
14	58 18
15	58 15
16	58 23
20	58 27
21	58 17
22	58 22
23	58 11
24	58 17
26	58 19
Sept 13	58 27
14	58 17
15	58 17
17	58 37
21	58 16
23	58 15
24	58 16
26	58 18
Oct 27	57 99
Nov 16	57 95
25	58 17
27	58 18
Dec 3	58 21
4	58 20
8	58 22
9	57 99
10	58 12
11	58 25
22	58 24
26	58 21
28	58 27

58 Orionis α, continued

1830	h m s
Jan 5	5 45 58 39
6	58 44
8	58 30
Feb 8	58 22
22	58 28
23	58 14
24	58 13
25	58 12
26	58 11
Mar 9	58 25
10	58 14
11	58 30
13	58 17
15	58 18
16	58 16
17	58 30
18	58 18
19	58 19
20	58 18
23	58 24
25	58 22
April 3	58 29
Aug 11	58 14
12	58 24
13	58 25
Sept 15	58 18
21	58 17
Oct 3	58 05
Dec 13	57 93
15	58 10
16	58 00
18	58 01
20	58 33
23	58 18
24	58 17
1831	
Mar 7	58 41
15	58 19
16	58 21
17	58 21
21	58 28
22	58 21
23	58 34
26	58 25
27	58 20
28	58 20
29	58 22

Columbæ γ

1829	h m s
Nov 27	5 51 30 46
Dec 3	30 61
1830	
Feb 4	30 94

18 Leporis θ

1829	h m s
Sept 13	5 58 27 69
21	27 68
24	27 46
Nov 25	27 74
26	27 68
27	27 64
Dec 3	27 79
11	27 62
1830	
Feb 4	27 80

✱ N P D 70° 11′±

1830	h m s
Jan 7	6 3 41 96

71 Orionis

1829	h m s
Dec 10	6 4 50 80

5 Monocerotis

1829	h m s
Sept 13	6 6 33 83
21	33 79
23	33 88
24	33 85
Nov 25	33 88
26	33 83
27	33 93
Dec 3	33 96
1830	
Feb 4	33 97

1 Canis Majoris ζ

1829	h m s
April 17	6 13 47 38
27	47 41
Sept 21	47 19
22	47 04
23	47 23
Nov 25	47 15
27	47 22
Dec 3	47 25

2 Canis Majoris β

1829	h m s
April 15	6 15 12 90
20	12 90
21	12 93
May 12	12 77
13	12 91
14	12 99
19	12 85
21	12 75
22	12 71
July 12	12 76
13	12 90
14	12 87
15	12 89
16	12 80
21	12 83
Sept 13	12 92
23	12 76
24	12 83
Nov 26	12 81
Dec 11	12 89
1830	
Feb 4	12 78

Argûs α

1829	h m s
April 15	6 20 10 60
17	10 64
20	10 71
21	10 86
27	10 73